Psychosocial factors, their correlation with stress and the effects of structured intervention strategies on the stress levels of black female college freshmen living in residence halls

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PSYCHOSOCIAL FACTORS, THEIR CORRELATION WITH STRESS AND THE EFFECTS OF STRUCTURED INTERVENTION STRATEGIES ON THE STRESS LEVELS OF BLACK FEMALE COLLEGE FRESHMEN LIVING IN RESIDENCE HALLS

AN ABSTRACT
SUBMITTED TO THE FACULTY OF THE SCHOOL OF EDUCATION, ATLANTA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

BY
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ATLANTA, GEORGIA
JULY 1986
Purpose of the Study

The purpose of this study was two-fold: (1) to determine what relation existed, if any, between the stress level and career maturity and interpersonal behavior of Black female college freshmen living in college residential halls and (2) to determine the effectiveness of multimodal treatment approaches in reducing stress in this sample population.

Significance of the Study

The anticipated benefits of this study should include, but not be limited to, the following:

1. It should assist counselors, psychologists, administrators, residence hall personnel, and student affairs personnel in positively intervening in the lives of female college freshmen living in residence halls, by providing strategies for enhancing their living arrangements.

2. It should provide insight into the career and social maturity of college freshmen as related to their stress levels.

3. It should increase the insight of college student affairs personnel and college officials relative to the nature and needs of the female population residing in residence halls.

Method and Procedure

The research design for this study is both correlational and experimental. Correlational procedures were applied to hypotheses one, two and three in carrying out Purpose One. Experimental procedures were applied to hypotheses four through nine in carrying out Purpose Two.

Participants

The participants consisted of thirty Black female college freshmen
living in residence halls at a small, church-related, southeastern, historically Black institution.

**Instruments**

The following data sources were used in the assessment procedures for this study: The Schedule of Recent Experience, Part A and Part B; the Symptoms Checklist; the Attitude Scale, Counseling Form B-1 of the Career Maturity Inventory; and the Short Form (Part 1 and Part 2) of the Interpersonal Behavior Survey.

**Conclusions**

Based on the findings of the study, the following conclusions seemed warranted:

1. Regardless of the mode of stress reduction treatment that this sample of Black female college freshmen were exposed to, they tended to experience decreasing tendencies in attitude toward career decision-making with increases in stress levels though not to a statistically significant degree.

2. Black female college freshmen tended to exhibit a general decrease in aggressiveness with increases in stress level. Those who received accurate stress reduction information by mail appeared to refrain from using words as weapons by doing such things as making fun of others, criticizing and putting others down causing increases in stress. The responses of those who received no treatment tended to show a decrease in their general aggressiveness, in tendency to lose their temper and to express anger in a direct, forceful manner with an increase in stress level.

3. Black female college freshmen, exposed to a structured stress reduction workshop, tended to exhibit a general decrease in assertive behavior with increases in stress. With increases in stress level, these students tended to be significantly less willing to say "No" to unreasonable or inconvenient demands from others. Those students who received accurate stress information by mail tended to demonstrate low general assertiveness accompanied by "slight" increases in stress levels. Students receiving no treatment tended to exhibit low levels of assertiveness with increases in stress levels.
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DEDICATION

IN HONOR AND GLORY TO GOD
PRAISE AND THANKSGIVING TO JESUS

IN MEMORY OF MY FATHER
THE LATE LEE ANDREW MITCHELL, SR.

TO MY MOTHER WITH LOVE
THE LOVELIEST AND GRANDEST OF MOTHERS
MRS. RUTH MITCHELL

TO MY AUNTS
MRS. WILLIE N. NEWSOM
AND
MRS. JAMIE MOORE

TO MY SISTERS AND BROTHERS
MRS. WILLIE R. GLOVER, MRS. DOROTHY L. GRAY
MRS. LOUISE JONES, MRS. DELOIS TOLER
REV. FLOYD L. MITCHELL, MR. LEE A. MITCHELL, JR.,
MR. ALVIN W. MITCHELL, MR. HENRY C. MITCHELL,
DR. LOUIS C. MITCHELL, D.D.S., MR. PRINCE E. MITCHELL,
MR. OLIVER W. MITCHELL, AND ELDER CHARLES E. MITCHELL
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Special thanks is extended to the writer's typist, Mrs. Reta Lacy Bigham, for her diligent cooperation. Sincere appreciation is extended to the writer's computer technician, Mr. Gregory Thigpen, and workshop trainee, Mr. Carl Jones.

J.V.M.
CHAPTER I

INTRODUCTION

When students first come to a college campus as freshmen, most are disoriented. Many are busy developing a cognitive map of the campus, and finding the appropriate paths to the proper places. In practical terms, students are getting a fix on the requirements that are in the formal curriculum. They learn quickly which course options are open to freshmen; how to drop introductory English; what specific prerequisites are needed for the first year physics course; and how to keep a scholarship. Equally frustrating is the fact that a significant number of them are undecided as to what particular major to pursue. In addition to the formal curriculum, they soon become familiar with the non-academic rules, and with the explicit sanctions imposed for breaking them: for example, the nature of the college's stand on drugs.¹

There seems to be considerable concern regarding the impact of stress upon these students' overall lives. The literature is replete with numerous materials and information that have been generated from research. When students properly consider their education as a challenge, stress can bring them a sense of competence and an increased capacity to learn. When their education is seen as a threat, however, stress can elicit feelings of helplessness and a foreboding sense of loss.

A critical issue that relates to stress among students in higher education is its effect on learning. The Yerkes-Dodson Law postulated

in 1908 that persons "under low and high stress learn the least and that those under moderate stress learn the most."\(^1\) Frequently, first year college students are under stress because of changes in their living situations. For some, it is the first year of extended separation from their families. Therefore, this aspect should be given consideration.

Students react to college in a variety of ways. For some students, college is stressful because it is an abrupt change from high school. For others, extended separation from home is a source of stress. Although some stress is necessary for personal growth to occur, the amount of stress experienced can sometimes overwhelm a student and make it difficult for him/her to cope.\(^2\)

Students changing their living situation might experience transitions that prove to be complicated by conflicts resulting from disagreements or miscommunications with roommates. This matter can be stressful in itself.\(^3\)

The research problems as perceived by this investigator are:

(1) How does stress affect the career maturity and interpersonal behavior of Black female college freshmen living in residence halls? (2) Can selected multi-modal treatment approaches assist this population in reducing the stress they experience?


\(^2\)Ibid.

\(^3\)Terrence J. Tracey and Patrick Sherry, "College Student Distress As a Function of Person-Environment Fit," Journal of College Student Personnel 25 (September 1984):436.
Purpose of the Study

The purpose of this study was two-fold: (1) to determine what relation existed, if any, between the stress level and career maturity and interpersonal behavior of Black female college freshmen living in college residential halls and (2) to determine the effectiveness of multi-modal treatment approaches in reducing stress in this sample population.

More specifically, the investigator was interested in obtaining answers to the following questions:

1. Is there a statistically significant relationship between mean stress level and the attitudes toward career decision making in a selected sample of Black female college freshmen?

2. Is there a statistically significant relationship between mean stress level and the interpersonal behavior of a selected sample of Black female college freshmen?

3. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen exposed to a structured group workshop and those not exposed?

4. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen who receive stress reduction information by mail and those who do not?

5. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen exposed to a structured group workshop and those who receive stress reduction information by mail?

6. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen after a two week time lapse for those exposed to a structured group workshop, those who receive stress reduction information by mail and those who receive no treatment?
In carrying out the purposes of this study, the following null hypotheses were tested. The .05 level of significance served as the decision rule:

1H₀: There will be no statistically significant correlation between stress levels and the attitudes toward careers of a selected sample of Black female college freshmen living in residence halls.

2H₀: There will be no statistically significant correlation between stress levels and aggressiveness of a selected sample of Black female college freshmen living in residence halls.

3H₀: There will be no statistically significant correlation between stress levels and assertiveness of a selected sample of Black female college freshmen living in residence halls.

4H₀: There will be no statistically significant difference between the pre/post stress symptoms status reported by those Black female college freshmen living in residence halls who are exposed to a Stress Reduction Workshop and those not exposed.

5H₀: There will be no statistically significant difference between the pre/post stress symptoms status reported by those who receive stress reduction information by mail and those who do not.

6H₀: There will be no statistically significant difference between the pre/post stress symptoms status reported by those who were exposed to a stress reduction workshop and those who receive stress reduction information by mail.

7H₀: There will be no statistically significant difference between the pre- and post-post stress symptoms status reported by those who were exposed to a stress reduction workshop and those not exposed.

8H₀: There will be no statistically significant difference between the pre- and post-post stress symptoms status reported by those who receive stress reduction information by mail and those who do not.

9H₀: There will be not statistically significant difference between the pre- and post-post stress symptoms status reported by those who were exposed to a stress reduction workshop and those who received stress reduction information by mail.
Evolution of the Problem

The writer became exceedingly cognizant and interested in the effects and consequences of stress, in retrospect, from personal experiences. As a result of these encounters, coping with stress reduction became an immediate personal priority.

Having been a college instructor for over fifteen years, the writer was interested in the overall progress and performance of upper-classmen, in general, and freshmen in particular, and in their total developmental progress.

Since World War II, changes in American higher education include growth in the size and complexity of institutions and increased diversity among students. A consequence of that rapid growth has been diminished as personal attention to students. One measure of excessive stress, that is, distress in college students, is their increasing use of helping professions such as counseling. Although some students may bring problems to the college campus, problems commonly reported portray a general picture of school-related stress; for example, the inability to do school work and the fear of academic failure.¹

An indicator of distress in college students is the dropout rate. Although nationwide figures are difficult to obtain, it is estimated that fifty percent of entering freshmen do not finish college four years later. "Students, feeling a mismatch between themselves and their college, wish to distance themselves from the source of stress, namely the college environment."²

²Ibid., p. 2.
It seems inevitable that educational personnel and helping professionals must address these issues of stress in order to accommodate and facilitate change as well as move toward the future without completely losing a sense of continuity with the past. Most importantly, some way must be found that will drastically alter the fact that one out of two freshmen students will never graduate from college.

Significance of the Study

The anticipated benefits of this study should include but not be limited to the following:

1. It should assist counselors, psychologists, administrators, residence hall personnel, and Student Affairs personnel in positively intervening in the lives of female college freshmen living in residence halls, by providing strategies for enhancing their living arrangements.

2. It should provide insight into the career and social maturity of college freshmen as related to their stress levels.

3. It should increase the insight of college student affairs personnel and college officials relative to the nature and needs of the female population residing in residence halls.

Assumptions

The following basic assumptions were made in designing this study:

1. It is assumed that the participants in this study can show significant reduction in stress level if they are exposed to safe supportive experiential activities or receive accurate stress reduction information by mail.

2. It is assumed that the phenomenon of regression toward the mean will not favor one group over another since the group will be randomly selected and randomly assigned.
Limitations

1. The study was confined to a female segment of one historically Black liberal arts college in the southeastern United States with an approximate enrollment of 1500 students. Generalizations from the findings of this study should be limited to situations that do not differ significantly.

2. The instruments in this study were of a self-report nature, therefore, the validity of the data is dependent upon the honesty and accuracy of the respondents.

Definition of Terms

For the purposes of this study, the following terms were defined below:

1. Stress Level.—A measure of the condition that may be purely physical, social, or psychological—including anticipation and imagination that triggers a stress reaction. Operationally, stress level was defined as the score obtained on the Schedule of Recent Experience.

2. Career Maturity.—The way in which a young person deals with his occupational choice is indicative of his general maturity and, conversely, in assessing the latter, consideration must be given to the way in which he is handling his occupational choice problem. Operationally, career maturity was defined as the score obtained on the Career Maturity Inventory.

3. Attitude Toward Career Decision Making.—Operationally, attitude toward career decision making was defined as the score obtained on the attitude subsection of the Career Maturity Inventory.

4. Multi-Modal Treatment.—Was defined as a structured stress reduction workshop, stress reduction information sent through the mail and the absence of treatment.

5. Interpersonal Behavior.—The unique and highly individualized pattern of behavior describing the manner in which the individual interacts with others. Operationally, interpersonal behavior was defined as the score obtained on the Interpersonal Behavior Survey.

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6. Residence Hall Students.—Was defined, operationally, as those students residing in campus living arrangements.

7. Stressor.—An event or condition that may be purely physical, social, or psychological including anticipation and imagination, and that triggers a stress reaction. Operationally, stressor was defined as those events or conditions that triggered a stress reaction as reported by the experimental, control I and control II groups.

8. Stress Symptoms.—Was operationally defined as those symptoms indicated on the Symptoms Checklist.

9. Relationship.—Was operationally defined as the correlation between two or more variables.

10. Stress Symptoms Status.—Was operationally defined as: (1) comparison of mean number of stress symptoms reported by groups by categories; (2) variables that caused more discomfort by groups; and (3) comparison of percent of population experiencing degrees of discomfort by categories during the course of the study.

11. Aggressive Behavior.—Is seen as behavior that originates from attitudes and feelings of hostility toward others. The purpose of aggressive behavior is to attack other individuals or to exert power over them in some fashion. Aggressive behavior is only incidentally directed toward some instrumental goal and often the attaining of that supposed goal is merely a rationalization for the aggressive actions. Aggressive people may deliberately wish to violate the rights of others, or may simply disregard the rights of others in pursuing their own goals. Operationally, aggressive behavior was defined as the score obtained on the Interpersonal Behavior Survey (Short Form).^1

12. Assertive Behavior.—Has been conceptualized as behavior directed toward reaching some desired goal which continues in the direction of that goal in spite of obstacles in the environment or the opposition of others. Operationally, assertive behavior was defined as the score obtained on the Interpersonal Behavior Survey (Short Form).^2

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^3Ibid., p. 2.
CHAPTER II

REVIEW OF THE RELATED LITERATURE

This chapter includes a review of the research literature related to various aspects of stress as it affects Black female college students living in residence halls. The literature is divided into the following sections: (1) the definitions and nature of stress, included in this section are seven subsections; (2) stress and Black college students; (3) residential living and stress; (4) career maturity and stress; and (5) interpersonal behavior and stress.

The Definitions and Nature of Stress

Hans Selye, an endocrinologist and winner of a Nobel Prize, is the person most responsible for our current understanding of stress. Stress is the nonspecific response of the body to any demand. The stimulus that precedes this response is called a stressor. This terminology is different from an engineer's use of the terms stress and strain: Selye's stress is the engineer's strain.¹

Schematic Representations of Selye's Basic Considerations and Symbolic Concepts of Stress

Hans Selye's research was first published in his classic book, The Stress of Life. Selye summarized stress reactivity as a three-phase process:

Phase 1: Alarm Reaction.—The body shows the changes that are characteristic of the first exposure to a stressor. At the same time, its resistance is diminished and, if the stressor is sufficiently strong (severe burns, extremes of temperature), death may result.

Phase 2: Stage of Resistance.—Resistance ensues if continued exposure to the stressor is compatible with adaptation. The bodily signs characteristic of the alarm reaction have virtually disappeared and resistance rises above normal.

Phase 3: Stage of Exhaustion.—Following long-continued exposure to the same stressor, to which the body had become adjusted, eventually adaptation energy is exhausted. The signs of the alarm reaction reappear, but now they are irreversible, and the individual dies.¹

Selye defined stress as the "nonspecific response of the body to any demand."² Greenberg, in response to this point of view, advocated that this definition means that good things (for example, a job promotion) to which we must adapt (termed eustress) and bad things (for example, the death of a loved one) to which we must adapt (termed distress), are experienced the same physiologically.³

Contemporary Investigations

Selye's research proved so interesting and important that he drew a large number of followers. One of these was A.T.W. Simeons, who related evolution to psychosomatic disease in his classic work, Man's Presumptuous Brain.⁴

²Selye, The Stress of My Life, p. 4.
Simeons argued that the human brain (the diencephalon, in particular) had failed to develop at the pace needed to respond to symbolic stressors of Twentieth-Century Life. For example, when self-esteem is threatened, the brain prepares the body with the fight-or-flight response. If the threat to self-esteem stems from fear of embarrassment during public speaking, neither fighting nor running away are appropriate reactions. Consequently, the body has prepared itself physiologically to do something contemporary psychology prohibits. The unused stress products break down the body, and psychosomatic disease results.¹

Some researchers have added to the work of Selye and Simeons in their investigative approaches to shed more light on the relationship of stress to body processes. With this understanding has come a better appreciation of just which illnesses and diseases are associated with stress, and how to prevent these conditions from developing.² For example, Dr. Harold Wolff became curious why one in one hundred prisoners of war, held by the Germans during World War II, died before their release, while thirty-three in one hundred held in Japanese camps died before their release. Keeping nutrition and length of time held captive constant, Wolff found that emotional stress was greater in German prisoner-of-war camps than in Japanese prisoner-of-war camps, which was the cause of much of this difference.³

Several researchers also helped clarify the effects of stress. Stewart Wolf demonstrated its effects on digestive function and Lawrence

¹Ibid., p. 36.
²Greenberg, Comprehensive Stress Management, p. 8.
³Ibid., p. 9.
LeShan on the development of cancer; George Engel studied stress and ulcerative colitis; Meyer Friedman and Ray Rosenman identified the relationship between stress and coronary heart disease; and Wolf and Wolff studied stress and headaches.¹

Some investigators have found ways of successfully treating stress-related illnesses. For example, Carl Simonton, believing personality to be related to cancer, has added a component to the standard cancer therapy; it consists of visualizing the beneficial effects of the therapy upon the malignancy. For some headache sufferers, Budzynski has successfully employed biofeedback for relief. Herbert Benson, a cardiologist, first became interested in stress when he studied Transcendental Meditation (T.M.) with Robert Keith Wallace. Benson then developed a relaxation technique similar to T.M. and has used it effectively to treat people with high blood pressure.²

John W. Mason, M.D., presented a provocative and explicit analysis of selected aspects of stress theory and research in biology and medicine, both before and after the introduction of Selye's stress formulations, which have been of major importance in the development and popularity of this research area. Attempts were made to explore some possible sources of present confusion and controversy in the stress field, with a view to the development of new research strategies that may enable one to clarify, update, and revise stress concepts and to facilitate future progress.³

It was suggested that an experimental re-evaluation of the concept of the nonspecificity of pituitary-adrenal cortical response is a matter

¹Ibid., p. 10.
²Ibid., p. 11.
of particular strategic importance, if one is to move out of the present prolonged period of stalemate and confusion over stress theory and terminology. Recent experimental studies, which suggest that the nonspecificity concept may have been applied erroneously to lower level physiological mechanisms, rather than to higher level psychological processes, were reviewed.¹

Historical Perspectives
Part I and Part II

From an historical perspective, Mason further stated that perhaps the single most remarkable historical fact concerning the term "stress" is its persistent, widespread usage in biology and medicine in spite of almost chaotic disagreement over its definition. This fact alone would seem to suggest both that the term has a curiously strong popular or intuitive appeal and that it is widely recognized for describing biological phenomena not adequately covered by other generic terms at present. It is sometimes said that durability provides a good index of the validity or usefulness of scientific concepts.²

According to Mason,

the great importance of the contributions of Hans Selye in popularizing the term 'stress' in recent decades, it is often assumed that the usage of the term 'stress,' in a biological sense, begins historically with Selye's publications. It may be useful in developing a fuller historical perspective of the subject, however, to realize that the term had a rather common everyday usage prior to Selye's introduction of a more specialized meaning for the word.³

¹Ibid.
²Ibid.
³Ibid.
Selye, himself, has remarked that he did not use the term "biologic stress" in his initial papers in 1936 on the subject because of "violently adverse public opinion," with the further explanation that "there was too much criticism of my use of the word stress in reference to bodily reactions, because of everyday English it generally implied nervous strain."\(^1\) Selye further remarked that such expressions as nervous stress and strain had long been commonly used by psychiatrists to describe mental tension.\(^2\)

Mason stated that the extent to which earlier usage of the term "stress" in a physiological sense appears not to be generally recognized at present. Mason stated further that "the purpose of reviewing the use of stress terminology prior to Selye's formulations is not to raise questions of priority." Selye's "important role in popularizing the term stress and the uniqueness of his formulations are quite clear."\(^3\)

It appears, however, that an historical perspective extending to earlier concepts of stress in everyday life and in medicine may be useful, not only in understanding some elements in the strong early opposition to Selye's stress concepts, but also, perhaps, in understanding some of the subsequent trends in the stress field. There are still some modifications of them and yet some unproven hypotheses.\(^4\)

Stress research has developed historically in two largely separate spheres, with the study of psychosocial sciences, while physical and humoral

\(^1\) Selye, *The Stress of Life*, p. 10.
\(^2\) Ibid., p. 15.
\(^3\) Mason, "A Historical View of the Stress Field," p. 7.
\(^4\) Ibid., p. 8.
stimuli have been studied mostly within the province of the physiological sciences. Psychological stress concepts appear to have a relatively long history, as judged by the medical use of the term "stress" during the early part of this century in relation to threatening psychosocial demands upon the individual.  

Physiological stress concepts grew largely out of the work of Selye, beginning in the 1930's. It is suggested that an important issue which has received too little scrutiny in the stress field so far has been the question of how much substantive linkage there really is between Selye's stress concepts, derived from primarily physiological and pharmacological research, and the stress concepts developed in largely independent fashion in the psychological stress field.

Controversial Issues and Clarifications

Selye made an attempt to clarify areas of controversy in the stress field, in response to a two-part article by Dr. John W. Mason. Selye tried to elucidate each source of confusion enumerated by Dr. Mason. Selye also stated that the "continued use of the word stress for the nonspecific response to any demand is deemed most desirable. The once vague term can now be applied in a well-defined sense and is accepted in all foreign languages as well, including those in which no such word existed previously in any sense."  


2 Ibid.

Subdivision of the stress concept has become necessary as more work has led to such notions as "eustress," "distress," "systemic stress" and "local stress." Confusion between stress as both an agent and a result can be avoided only by the distinction between "stress" and "stressor." It is explained that the stress syndrome is by definition nonspecific in its causation. However, depending upon conditioning factors, which can selectively influence the reactivity of certain organs, the same stressor can elicit different manifestations in different individuals.  

Psychophysiological Perspectives

In its medical sense, "stress is essentially the rate of wear and tear in the body." One cannot avoid stress as long as one lives, however, one can learn a great deal about how to keep its damaging side-effects to a minimum.  

Girdano and Everly view stress in the context of their book as a fairly predictable arousal of psychophysiological (mind-body) systems which, if prolonged, can fatigue or damage the system to the point of malfunction and disease. They also stated that stress is a term used mostly in physics to mean strain, pressure or force on a system. When used in relation to the body cells, it describes the effects of the body reacting, that is, the buildup of pressure, the strain of muscles tensing.  

According to Grasha and Kirshenbaum, stress is not a single emotion. Rather, it is a label used to categorize a number of related emotions.

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In everyday terms, stress is described by such feeling labels as frustration, tension, anger, hostility, or aggression, or by simply saying we are under pressure. In "sufficient quantities, stress can make us ill or even kill us."¹

Altrocchi advocates that stress is the "body's response to stressful stimuli and may include any or several of the following: changes in blood pressure, pulse and respiratory rate, skin color, gastric motility, pupillary size, saliva secretion (for example, dry mouth), size of blood vessels, and penile erectile capacity, as well as increased sweating and spontaneous muscle activity (such as trembling)."² Some of these same events occur in response to fear or anxiety and are assumed to be remnants of a primitive readiness to fight, flee, or freeze in the face of danger. When stressful stimuli are removed or diminished, most of the bodily functioning that has been altered in stress returns to what is normal for the individual.³

When stressful stimuli are intense or continued, or when the individual learns to respond with stress to a commonly occurring situation or to a wide range of situations so that stress is frequent or persistent, the bodily responses may be very difficult to alter. Chronic high blood pressure, for example, is one common result of such repeated and cumulative stress over a number of years.⁴

³Ibid.
⁴Ibid.
Psychosocial Aspects

According to Whitman and others, stress is any situation that evokes negative thoughts and feelings in a person. The same situation is not evocative or stressful for all people, and all people do not experience the same negative thoughts and feelings when stressed.¹

Karlin states that stress is a condition we all experience. It can be caused by many things, such as frustrations, time binds, overwork, frightening experiences, emotional conflicts, and even pleasant events like marriage or an outstanding personal achievement. Normal amounts of stress never hurt anybody; in fact, moderate amounts of stress can actually enhance performance and make for a more meaningful, exciting life. Stress becomes dangerous only when it becomes excessive, for example, forcing the body to run like a car with the accelerator stuck to the floor.²

Karlin further states that

the word stress was borrowed from the language of physics and engineering, where it refers to a force that tends to deform a body. To compile a list of stress-related diseases is like thumbing through a medical dictionary. High blood pressure, heart attack, strokes, headaches, ulcers, allergies, infections, insomnia, asthma, diabetes, cancer, even accidents, all can be triggered and made more severe by excessive stress.³

Hans Selye advocates that an increase in pulse rate and an increased tendency to sweat are common in persons undergoing stress. No two people react the same way, but the usual responses are one will become more


³Ibid., p. 142.
irritable and sometimes suffer insomnia, even long after the stressor agent is gone. An individual will usually become less capable of concentrating, and will have an increased desire to move about.  

Overall Perspectives

Concern over the "stress epidemic" has prompted what may be called a mass fight-and-flight reaction. New "fields have sprung into being: behavioral medicine to battle stress-related illness; psychoneuroimmunology to explore the way emotional states affect the body's defenses."  

According to Girdano and Everly, by definition, "stress is an arousal reaction to some stimulus, be it an event, object, or person. This stress reaction is characterized by heightened arousal of physiological and psychological processes. The stimulus that causes this arousal reaction is the 'stressor.'"  

A major source of confusion which makes the study of origins of stress difficult is the tendency to lump all "stressors" together because they may all result in the same general reaction called stress. The following categorization of stressors should help alleviate some of this confusion. The classification is based upon the external nature of the "stressor," that is, upon the fundamental basis or cause of the stress reaction. From this, "stressors" may be divided into three general classes:

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2"Stress: Can We Cope?" Time, 6 June 1983, p. 48.

3Girdano and Everly, Controlling Stress and Tension, p. 52.
Psychosocial Causes: Adaptation, Frustration, Overload, Deprivation.--These stressors are a function of the complex interaction between social behavior and the way our senses and our minds interpret those behaviors. In other words, much of our societal stress is determined by the meanings that we assign to the events in our lives. Different individuals are likely to interpret differently, or to assign different meanings to the same situation. This explains why each person's pattern of societal stress is unique.

Bioecological Causes: Biorhythms, Nutrition, and Noise.--These stressors basically are biologically related and may arise out of our relationship with our environment. They are only minimally subject to differing interpretations.

Personality Causes: Self-perception, Behavioral Patterns, and Anxiety.--These reflect the dynamics of an individual's self-perception and characteristic attitudes and behaviors which may somehow contribute to excessive stress.\(^1\)

According to Davis and others, stress is an everyday fact of life. Stress is any change that one must adjust to. While an individual usually thinks of stressful events as being negative, such as the injury, illness or death of a loved one, they also can be positive. For instance, getting a new home or a promotion brings with it the stress of change of status and new responsibilities. Falling in love can, for some people, be as stressful as falling out of love.\(^2\)

The environment may bombard the individual with demands to adjust. The individual must endure weather, noise, crowding, interpersonal demands, time pressures, performance standards, and various threats to security and self-esteem. Secondly, from a physiological standpoint, the rapid growth of adolescence, aging, illness, accidents, poor diet, and sleep disturbances all tax the body. Environmental threats also produce body changes

\(^1\)Ibid., p. 53.

that are themselves stressful. Reactions to problems, demands, and dangers are very much influenced by the "fight or flight" response: When the stimuli coming in are interpreted as threatening, the regulating centers give the body information to speed up in preparation to confront or escape the threat. The pupils become larger, and hearing becomes acute. The muscles tense to deal with the challenge. Blood pulsates through the head so that more oxygen reaches the brain cells, stimulating the thought processes. The heart and respiratory rates increase. Blood drains from the extremities and pool into the trunk and head, while the hands and feet feel cold and sweaty.¹

If the body is not given relief from the biochemical changes that occur during the "fight or flight" response, chronic stress may result. When the individual is already stressed and more stress is added, the regulatory centers of the brain will tend to overreact. This causes wear and tear on the body and potentially "breakdown and death." For example, the chronic arousal of the "fight or flight" response can turn transient high blood pressure, or hypertension, into permanent high blood pressure. About twenty-five million Americans have hypertension and half of these people are unaware of their condition.²

Davis and others further state that "stress has been found to be related to many other physical ailments such as headaches, peptic ulcers, arthritis, colitis, diarrhea, asthma, cardiac arrhythmias, sexual problems, circulatory problems (cold hands and feet), muscle tension and even cancer."³ The cost in the United States for health care is skyrocketing.

¹Davis, Eshelman, and McKay, The Relaxation and Stress Reduction Workbook, p. 6.
²Ibid.
³Ibid.
One of the major reasons for this is that the great majority of Americans do not practice preventive medicine. That is, they do not make an effort to reduce the stresses of their lives. They do not realize that they need not "remain totally at the mercy of their involuntary 'fight or flight' response."\(^1\)

Thirdly, how the individual interprets and labels experiences and makes predictions for the future can serve either to relax or stress the individual. Dwelling on worries produces tension in the body, which, in turn, creates the subjective feeling of uneasiness and leads to more anxious thoughts.\(^2\)

Alton R. Kirk, a psychologist and suicidologist who deals primarily with crisis intervention, assaults, depression, stress, homicide, and suicide, discussed the relationship between stress, depression, homicide, and suicide within the psychosocial context of Black males. According to Kirk, high blood pressure (hypertension), a condition "commonly associated with stress, affects almost twenty-four million Americans, a significant number of whom are Blacks."\(^3\)

It is the contention of Kirk, that stress is significantly related to the degree and amount of power that one perceives he or she has within the societal context. Kirk stated that it "should come as no surprise to

\(^1\)Ibid.
\(^2\)Ibid.
anyone that Blacks have little power, real or perceived, within the American society."\(^1\) Consequently, Blacks "experience a great deal of stress, which can result in poor physical and mental health, as well as in destructive behaviors such as alcohol, drug abuse, assaults, homicides, and suicides."\(^2\)

In summary, stress and stress-related maladies are of concern in the 1980's and are likely to be of continued concern. Rapid technological and economic change, rising expectations in the face of lack of opportunities, and everyday pressures of life in almost any milieu produce fertile breeding grounds for stress. Stress is an all-too-frequent part of life which must be explored and evaluated continually if humans are to cope successfully.

Hans Selye is, without question, one of the great pioneers of medicine and the leading pioneer in stress research. Many of the aforementioned investigators in stress research are somewhat in agreement with Selye's research. Selye remains today the foremost researcher in the field. His famous and revolutionary concept of stress opened up countless new avenues of treatment through the discovery that hormones participate in the development of many nonendocrine degenerative diseases.

Investigators have come to realize how heavy a toll stress is taking on the nation's well-being. It seems that Hans Selye made a career of studying the ill effects of stress, but nevertheless believed that it was the spice of life.

\(^1\)Ibid., p. 4.

\(^2\)Ibid.
Stress and Black College Students

Whitman and others advocate that one model that is useful in understanding stress among students is the person-environment model. According to this model, stressful events can be appraised by an individual as "challenging" or "threatening." When students appraise their education as a challenge, stress may bring them a sense of competence and an increased capacity to learn. When education is seen as a threat, however, stress can elicit feelings of helplessness and a foreboding sense of loss.¹

Students react to college in a variety of ways. For some students, college is stressful because it is an abrupt change from high school. For others, separation from home is a source of stress. Although some stress is necessary for personal growth to occur, the amount of stress can overwhelm a student's ability to cope.²

Fleming examined the different sources of stress and satisfaction for Black students in two large urban southwestern universities, one predominately Black and the other predominately white. The study covered several aspects of college life, but focused on an unexplored area of investigation: sources of stress and satisfaction in a student's life, including the most unhappy or upsetting time lived through, and the happiest or nicest time lived through.³

The findings on the sources of unhappiness among the college students in the study indicate that students at both the Black and white

²Ibid., p. 2.
colleges were remarkably similar. The problems that elicited negative emotions were school-related problems - with academic and interactions with faculty, administration, and staff were most likely to initiate serious periods of unhappiness among 30 percent of these students.\(^1\)

Seventeen percent of the students complained that intrapsychic problems had ushered in periods of unhappiness, that is, problems with an internalized focus that is associated with feelings of confusion, helplessness, and resignation. Three categories (together accounting for thirty-four percent of the worst experiences) speak to the various kinds of interpersonal vulnerabilities that range from traumatic loss or injury to the absence of friendship. Ten percent of the problems involved interpersonal difficulties with significant others, people with whom the students had close or intimate relationships. Closely related were social problems in relating to non-significant others and the social environment. Nine percent of the problems were of this variety: problems getting along with people.\(^2\)

According to Livingston:

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little, if any, effort has been made to increase awareness of hypertension among Black college students. The importance of exploring awareness of hypertension among Black college students and suggesting, if necessary, strategies (e.g., counseling) to increase such awareness becomes more meaningful in the context of the problems associated with hypertension awareness and control in the general population.\(^3\)
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The participants in the study consisted of 432 undergraduate students enrolled in introductory sociology classes during the fall semester.

\(^1\)Ibid.

\(^2\)Ibid.

of 1980 at three predominately Black urban universities. There were 365 (84.3%) Black American students and fifty-two (12%) non-American students of African ancestry from various third world countries. The remaining 3.7% comprised other ethnic groups. The target population of the study was Black college students. The sample consisted of 264 females and 155 males, with ages ranging from 16 to 48 years and a mean age of 21.1. Freshmen constituted the largest number.

During the first week of classes in the fall semester of 1980, professors teaching the introductory classes distributed the self-administered questionnaire, the Hypertension Awareness Index. In exploring awareness of hypertension among Black college students, at least 50% of the students sampled gave incorrect responses or responded that they did not know the answer to the statement made. The misconception about hypertension could have severe ramifications for the detection, treatment, and control of hypertension in the Black college student population.

In conclusion, the target population of the study consisted of Black urban college students and, as such, the restrictions on applying the results of the study to other dissimilar college populations become obvious. As the study was exploratory, it provides valuable information regarding the misconceptions Black college students have about hypertension, and also regarding possible factors that may influence the expression of such misconceptions. This preliminary information provides an important base on which future research concerned with the detection,

1Ibid., p. 105.

2Ibid., p. 106.
treatment, and control of hypertension in the Black college student population can be built.¹

According to Reeder and Heppner, an abundance of research has been conducted recently on stress, coping, and real-life problem-solving. For example, investigators have made efforts to describe and assess coping efforts, to identify coping resources, and to identify stress precursors and correlates.²

It has been suggested that the way people manage internal and external stresses depends partly on their cognitive appraisals of situations and their abilities to cope with problems. Cognitive appraisal of coping abilities may mediate coping performances and outcomes. How well people can execute courses of action required to deal with prospective situations has revealed that self-appraisals (self-efficacy judgments) are strongly related to actual coping performances. Secondly, an appraisal of abilities seems to be related to coping with stressful situations. In particular, investigations using students of college age have revealed that people’s appraisals of their real-life coping abilities are related to a number of cognitive, affective, and behavioral measures involved in the coping process.³

After conducting a review of the problem-solving literature, Reeder and Heppner found that although researchers are investigating the processes involved in personal problem-solving, little has been done to relate the findings of these studies to special populations. Less attention, however,

¹Ibid., p. 110.


³Ibid., p. 155.
has been paid to how Black students cope with stress and attempt to solve problems that confront them. The intent of the study was to examine (a) whether relationships between problem-solving, self-appraisal variables found in white populations are similar to those in Black populations, and (b) whether there are differences in the problem-solving activities of urban and rural Blacks.

The sample for this study consisted of eighty-four Black undergraduate students, primarily freshmen and sophomores, attending a large, public, predominately white midwestern university. There were forty-nine urban/metropolitan participants (ten men, thirty-nine women) and thirty-five rural/metropolitan participants (fifteen men, twenty women) included in the study. The mean age of the women was 19.2 and the mean age of the men was 19.0.

The instruments used were the Problem Solving Inventory, the Level of Problem Solving Skills Estimate Form, and the Ways of Coping Scale. The participants were recruited from introductory psychology classes and from lists of Black students obtained from a minority student program coordinator, Black faculty and staff, and participants.

The study gave preliminary indications that Black college students respond in very similar ways to white college students on three measures of personal problem solving. Statistically, significant differences were not found between metropolitan and non-metropolitan Blacks, which may be indicative of no problem solving differences between those two groups or

\[^1\text{Ibid.}\]
\[^2\text{Ibid.}\]
\[^3\text{Ibid., p. 156.}\]
they may reflect some measurement issues.\textsuperscript{1}

In conclusion, it seems important that instruments need to be normed on Black and other minority populations. If society is to offer fuller experiences to all individuals, the field of psychology needs to attend more fully to the possibly idiosyncratic psychological qualities of minority groups by examining issues in non-traditional and minority research populations. These results should be regarded as preliminary until the representativeness of this sample of Black students is assessed. How similar will the students in predominately Black colleges and universities be in relation to other institutions? Nonetheless, the data regarding problem solving by Blacks represent a beginning and merit further examination.\textsuperscript{2}

Pliner and Brown have suggested that ethnicity seemed to be a factor in anticipating stress in the financial domain such as meeting the cost of living. From their participants, they found that Blacks and Hispanics perceive events in the financial domain as more stressful than do whites or Asian-Americans.\textsuperscript{3}

\textbf{Residential Living and Stress}

Hardy, Orzek and Heistad developed a program dealing with preventive interventions for roommate conflict. Traditionally, much of the late adolescent turmoil of separating from parents and learning to live more

\textsuperscript{1} Ibid.
\textsuperscript{2} Ibid.
independently has focused on the living situation with peers.¹

The Learning to Live With Others program was designed to both educate participants about the developmental stages involved in this transition and to provide them with substantive experiential exercises designed to develop the communication and other practical skills necessary to live successfully with others.²

The target population of this program was comprised of individuals of college age who moved away from their families of origin to live with peers, those who live in group arrangements (residence halls, fraternities or sororities), and those who have found new roommates for their current residence or who have moved in with someone else. For students changing their living situation, transitions may be complicated by conflicts resulting from disagreements or miscommunications with roommates.³

The program focused on developing knowledge and skills in members of an identified population who may face problematic, stressful aspects in their environments. The investigators were aware that in society the norm is for late adolescents to move out of their parents' home and into their own living spaces.⁴

Tracey and Sherry conducted a study to assess relationships of several persons, environment, and person-environment fit measures to several indicators of student distress and strain. A stratified, random

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²Ibid.

³Ibid.

⁴Ibid., p. 111.
sample of five residence hall floors (one per residence complex) was drawn from the thirty total floors on the campus of a large northeastern university.\(^1\)

Questionnaires were distributed to the 316 students who lived on those sampled floors. Of the 316 students sampled, 152 usable returns were obtained, yielding a 48% return rate. The average age of the participants was 20 years, and the group consisted of 45% women and 55% men.\(^2\)

All students residing on the sampled floors were mailed a cover letter describing the study, a University Residence Hall Environment Scale, a Frequency of Help Seeking Questionnaire, the state scale of the State-Trait Anxiety Inventory, and a return envelope. Reminder postcards were sent one week and two weeks after the initial mailing. No other follow-up was performed.\(^3\)

The findings indicated that help seeking was negatively related to anxiety and physical symptoms suggest that those who sought help early, at the first sign of distress and strain, tended to experience less anxiety and fewer physical symptoms than those who did not seek help. The primary value of the study was the definition and examination of person-environment fit as it relates to college student distress.\(^4\)

The results of the study, according to the investigators, could be used to help student affairs professionals identify students who are most likely to experience distress and perhaps suggest preventive steps.\(^5\)

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2. Ibid., p. 438.

3. Ibid.

4. Ibid., p. 442.

5. Ibid.
According to Lewis and Lewis, when counselors develop programs for the benefit of people experiencing life crises, they are called on to again use the skills needed for carrying out primary prevention strategies. Counselors working with specific age groups or populations know what crisis-provoking situations their clients tend to face in great numbers. Thus, they can prevent severe problems either by creating educational and training programs that help groups of people facing common stress situations or by encouraging self-help groups that can provide mutual support.¹

According to Schuh and Shipton, there are factors in the residence life environment that are contributing to the dramatic increase in the number of students expressing tension and stress. Effective counseling relationships need to be established, and the nature of the work needs to include prevention and developmental activities. One of the issues that is a problem for residence hall administrators is the development of close relationships with other agencies on and off campus that provide services for students.²

Career Maturity and Stress

Although there has been a recent increase in research on career development and behavior of pre-college Blacks, there has been relatively little on higher education and adulthood. Most post-secondary research has concentrated on access. Nevertheless, there are some useful findings. The Black student is as likely as any other to come to higher education


with ambition, an appreciation for work, and high career expectations, although sex-role influences may inhibit the career and educational aspirations of Black women as they do White women.¹

Women continue to remain underrepresented in many non-traditional careers, and this disparity is even greater for minority women. One of the primary reasons for this problem is the lack of female role models who have successfully made it in careers traditionally labeled for men only.²

Although career indecision could be conceptualized as a complex, multidimensional disorder, there has been a tendency to think of career indecision as a routine developmental task. This conceptual approach to career indecision must be based, at least to some extent, on the fact that thousands of students each year make the transition from high school to college, encountering identifiable demands from their new environment to make significant, long-term career decisions.³

Although new programs during freshmen orientation and better advising systems have been developed for dealing with students' career decision-making demands, the university career-counseling center in most settings maintains most of the responsibility for providing services to the undecided student. The student reporting to the university counseling center with career indecision is quite likely to receive traditional career services, for instance, interest testing and occupational resources.

¹Herr and Cramer, Career Guidance and Counseling Through the Life Span, p. 152.
material. This traditional career model is perhaps the strongest evidence of the predominance of the developmental approach to career indecision. Although this approach may work well for many students, clinical experience convinced the investigator that for some students indecision is a much more complex phenomenon.¹

**Interpersonal Behavior and Stress**

An obvious prerequisite to effective interpersonal relationships is willingness to engage in interaction with others at some minimal level. Socializing is an important part of the human experience, and much of life is the product of social interaction. Nevertheless, many people are uncomfortable in social situations because they feel shy, an obvious example of inhibitory social influence. Shyness as a phenomenon has been studied by social psychologists and others. Of thousands of high school and college students surveyed, 40% described themselves as presently shy, and 80% reported that they had been shy at some period in their lives.²

Sullivan states that the individual cannot exist apart from his or her relations with other people. The relatively enduring pattern of recurrent interpersonal situations which characterize a human life is personality.³ From the first day of life, the baby is a part of an interpersonal situation, and throughout the rest of its life it remains a member of a social field.⁴

¹Ibid.


Significant developmental milestones regarding the processes of social interaction occur in academic settings. Frequently, there is great pressure for students to engage in social behavior. Consequently, estimates of the incidence of social anxiety problems range as high as 30% in a college population. Because adequate social relationships may be related to a variety of measures of adjustment, prevention of problem dealing with social stress would be of significance.¹

Burchfield and others conducted a study with forty-four female subjects, the role of fulfillment of affiliative needs as a moderator of the interpersonal stress-illness relationship was investigated. It was predicted that individuals whose affiliative needs were unfulfilled would report more symptoms after they experienced high levels of interpersonal stress than would individuals whose needs were fulfilled. These hypotheses were confirmed using analyses of variance.²

In summary, many facets of the relationships between stress levels and career maturity and interpersonal behavior as they affect Black female college freshmen have been considered in the review of the pertinent literature. Five general approaches that the writer considered significant in exploring and surveying the different aspects were incorporated into various sections for clarity. These sections were: (1) Definitions and Nature of Stress, which included seven subcategories, (2) Stress and Black College Students, (3) Residential Living and Stress, (4) Career Maturity and Social Interaction, (5) Stress and Social Interaction.


and Stress, and (5) Interpersonal Behavior and Stress.

It appears that stress and stress-related disorders are a growing concern and as the literature indicates, are likely to be a continued concern in the future. It appears that four factors seem to be indicative of this increasing concern over stress and stress-related disorders. These four factors are: (1) technological change, (2) economic change, (3) rising expectations in the face of lack of opportunities, and (4) pressures brought about by everyday life situations, which seem to undergird situations productive in creating stress.

Hans Selye, a leading precursor and pioneer in stress research, has stood at the threshold and remains today as the foremost researcher in the field. Many of the previous and aforementioned investigators in stress research are somewhat congruent with Selye's research contributions.

The literature appears to convey several ways in which stress may be viewed and defined, depending upon one's perspective. From a physiological point of view, stress may be viewed as any state during which the body utilizes more energy than it ordinarily would. In a general way, reactions to stressful situations, that is, extremes of overwork, anxiety, pain, and temperature, occur in three well-defined stages: (1) the alarm reaction, (2) resistance to stress, and (3) exhaustion stages.

The literature indicates that students react to college in a variety of ways. For some students, college is stressful because it is an abrupt change from high school. For others, making the transition from an extended separation from home is stressful. Further, other problems that appeared stressful and seemed to surface frequently in the literature ranged from traumatic loss or injury to absence of friendships. Within this range, some of the problems were interpersonal difficulties with
significant others, people with whom the students had close or intimate relationships.

The literature indicates that in today's society the norm is for late adolescents to move out of their parents' home and into their own living space. For students changing their living situations (residential living on campus), transitions may be complicated by conflicts resulting from disagreements or miscommunication with roommates.

The literature indicates that there has been relatively little research (as implied by the literature) on career development and behavior in higher education and adulthood relative to Blacks, in spite of a recent increase in the study of career development and behavior in pre-college Blacks.

Black students are as likely as any other in their pursuit of higher education to bring with them to the academic arena an appreciation for work, surging ambition, and high career expectations. The literature indicated that women continue to remain less represented in several non-traditional careers, and the disparity is greater for minority women.

As the literature reveals, the socialization process is an integral and important aspect of human experiences. A great portion of life is the product of social interaction. A large percentage of high school and college students describe themselves as being shy, and an even larger percentage reported that they had been shy at some period in their lives.
CHAPTER III

METHOD AND PROCEDURE

This chapter presents the research design, sample and selection procedure, instruments, procedure for implementation and analyses of the data for this study.

Research Design

The research design for this study is both correlational and experimental. Correlational procedures were applied to hypotheses one, two and three in carrying out Purpose One. Experimental procedures were applied to hypotheses four through nine in carrying out Purpose Two.

Correlational

An important use of correlation is in prediction. When correlational analysis indicates some degree of relationship between two variables, the information about one of them permits the investigator to make predictions about the other.¹

Correlational studies are relatively simple to design and conduct. The value of such studies lies in the thoroughness with which the variables are selected. These studies do not require large samples. It can be assumed that if a relationship exists, it will be evident in a sample of moderate size, for instance 50 to 100 cases.²


²Ibid., p. 328.
In this study, stress levels were correlated with two criterion variables, career maturity and interpersonal behavior of second semester Black female college freshmen living in residence halls to determine if relationships exist. Coefficients of determination were calculated to ascertain the relative accuracy with which predictions could be made.

Experimental

Experimental studies are designed for establishing causal relationships.

Experimental design refers to the conceptual framework within which the experiment is conducted. An experimental design serves two functions: (1) it establishes the conditions for the comparisons required by the hypotheses of the experiment and (2) it enables the experimenter, through statistical analysis of the data, to make meaningful interpretations of the results of the study.¹

Experimentation is the most rigorous and the most desirable form of scientific inquiry. The controlled conditions that characterize the experiment make it possible to identify verified functional relationships among the phenomena of interest to educators.²

Experimenters who control the condition under which an event occurs have distinct advantages over observers who simply watch or study an event without control: (1) They can manipulate or vary the conditions systematically and note the variation in results; (2) They can make the event occur at a time when they are prepared to make accurate observations and measurements; (3) They can repeat their observations under the same

¹Ibid., p. 260.
²Ibid., p. 294.
conditions, for verification, and can describe those conditions so that other experimenters can duplicate them and make an independent check on results.¹

A disadvantage is that there are many important questions in education that cannot be solved by experimentation.

Experimental design procedures in this study were employed to determine the causal relationship between exposure to experimental treatments: A structured workshop designed to reduce stress (experimental group), accurate stress reduction information by mail (control I group), and the stress level in a non-treatment control group (control II group).

Table 1 presents the pre, post and post/post design for the experimental, control I, and control II groups' design to be employed in this study.

**Sample**

The sample consisted of 30 Black female college freshmen living in residence halls at a small church-related historically Black institution.

**Selection Procedure**

From a pool of 360 residential female Black college freshmen students, one hundred were randomly drawn for carrying out Purpose One. From the sample of one hundred, students were randomly assigned to three groups of ten each. By a toss of a fair coin, one group was designated as the experimental group, another control group I and the remaining one, a no treatment control group II. These groups served for carrying out Purpose Two.

¹Ibid.
### TABLE 1

**RESEARCH DESIGN**

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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R)Control II</td>
<td>Schedule of</td>
<td></td>
<td>Symptoms</td>
<td>Symptoms</td>
</tr>
<tr>
<td></td>
<td>Recent A, B</td>
<td></td>
<td>Checklist</td>
<td>Checklist</td>
</tr>
<tr>
<td>N = 10</td>
<td>Experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CMI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IBS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: SC - Symptoms Checklist  
CMI - Career Maturity Inventory, Attitude Scale  
IBS - Interpersonal Behavior Survey (Short Form)
Instruments

The following data sources were used in the assessment procedures for this study: The Schedule of Recent Experience, Part A and Part B; The Symptoms Checklist; The Attitude Scale, Counseling Form B-1 of the Career Maturity Inventory; and the Short Form (Part I and Part 2) of the Interpersonal Behavior Survey.

Schedule of Recent Experience

The Schedule of Recent Experience was constructed by Thomas Holmes, a medical doctor at the University of Washington School of Medicine, Seattle, Washington. The schedule ranks forty-two critical changes in the life of an individual according to the severity of their impact. An individual is probably aware of the major ongoing environment stress in life, however, one is likely to underestimate how many stressful changes occur everyday to which one is forced to adjust.\(^1\)

Part A includes twelve of the forty-two items of life events that happened to an individual within the last year. If the event happened, the individual should place a check in the box next to it. Part B is comprised of the remaining items (30). The individual indicates the number of times that each applicable event happened within the last two years. The individual then writes in the mean value for those events that happened to him/her. For items in Part B, the respondent multiplies the mean value by the number of times an event happened, and enters the result in "your score." The mean values in Part A and "your scores" in Part B are added to get the total score.\(^2\)

\(^1\)Davis, Eshelman, and McKay, The Relaxation and Stress Reduction Workbook, p. 6.

\(^2\)Ibid., p. 7.
Multiplying the frequency of occurrence of events by mean values, supplied by the publishers, yields a score for the respondent. Based on research findings, the respondent is able to estimate his/her chances of experiencing problems in the future as a result of the exposure to the stressful event or events. The score is listed as follows:

<table>
<thead>
<tr>
<th>Examinee</th>
<th>Probability of Being Sick in the Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>300+</td>
<td>80%</td>
</tr>
<tr>
<td>150-299</td>
<td>50%</td>
</tr>
<tr>
<td>Less than 150</td>
<td>30%</td>
</tr>
</tbody>
</table>

Symptoms Checklist

The Symptoms Checklist was used to determine which symptoms one will want to work on and also as a monitoring device. This symptoms checklist demonstrates a great deal about how one responds to stress. The checklist is comprised of stress-related symptoms for the degree of discomfort they cause using a ten-point scale from one to ten.\(^1\) Once the stress-related symptoms have been identified, the respondent chooses the one that bothers him/her the most and selects the techniques that will be used to relieve the symptoms. For this purpose, the Symptom Effectiveness Chart was used.\(^2\)

Career Maturity Inventory

Over twenty years of research by Dr. John D. Crites resulted in the career development model that forms the base for the Career Maturity

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\(^1\)Ibid., p. 12.

\(^2\)Ibid.
Inventory (CMI). Several investigators have found it a valid and important component in career education and guidance programs. The instrument is available in self-scored and machine-scored formats. It is easy to administer, score, and interpret. The Career Maturity Inventory can be used for needs assessment in planning programs and instruction, as well as for increasing the outcomes and effectiveness of programs. The instrument allows counselors to work with individuals or groups in career planning.1

For Purpose One of this study, the Attitude Scale (Counseling Form B-1) was employed. The Attitude Scale has been more widely used than the Competency Test up to this point.2

The Attitude Scale elicits the feelings, the subjective reactions, the dispositions that the individual has toward making a career choice and entering the world of work. Five attitudinal variables are surveyed: (1) decisiveness in career decision making, (2) involvement in career decision making, (3) independence in career decision making, (4) orientation to career decision making, and (5) compromise in career decision making. The Counseling Form B-1 yields a separate score for each of the five variables, and takes approximately forty minutes to administer. The scale should be considered as a research instrument in terms of data available for interpretation of the separate variables.

The best-established utility of the Attitude Scale is its validity as an operational definition of the Career Choice dimension in the model of career maturity. This model has been used extensively to test hypotheses

1Herr and Cramer, Career Guidance and Counseling Through the Life Span, p. 485.

2Career Maturity Inventory Administration Use Manual, p. 6.
stemming from career development theory. Among these are such propositions as vocational development as a specific aspect of general development.

Interpersonal Behavior Survey

The Interpersonal Behavior Survey was developed by Paul A. Mauger and David R. Adkinson. The scale is a standardized inventory which measures and distinguishes assertive and aggressive behavior. Additionally, a short form, consisting of the first thirty-eight items, provides a general sample of behaviors and can be completed in ten minutes or less. A longer abbreviated form, consisting of the first 133 items, provides information on all scales and usually takes less than thirty minutes. For the purposes of this study, the abbreviated form, Parts I and II, were utilized.

Parts I and II (items 1 through 133) provide short scales measuring a wide variety of assertive and aggressive behaviors. They are approximately one-half as long as Parts I through III (Items 1 through 272), but they sample almost as many behavioral subclasses. They are useful in situations in which the amount of time for assessment is limited to about one-half hour. The subclasses and their descriptions are listed as follows:

1. General Aggressiveness, Rational-Short (GGRS).-- Is a shortened version of the Interpersonal Behavior Survey. It samples aggressive behaviors and measures the general response class of aggressiveness over a wide variety of item content including aggressive behaviors, feelings, and attitudes.

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2Ibid.
2. Expressions of Anger-Short (EA-S).—Is an indication of the tendency to lose one's temper and express one's anger in a direct, forceful manner.

3. Disregard for Rights-Short (DR-S).—Measures the tendency to ignore the rights of others in order to protect oneself or to gain an advantage.

4. Verbal Aggressiveness-Short (VE-S).—Gives an indication of the using of words as weapons by doing such things as making fun of others, criticizing, and putting others down.

5. Physical Aggressiveness-Short (PH-S).—Reflects the tendency to use or fantasize using physical force.

The Assertiveness Scale also includes five subclasses which measure samples of assertive behaviors.

1. General Assertiveness, Rational-Short (SGR-S).—A general measure of assertiveness; samples general assertive behaviors.

2. Frankness-Short (FR-S).—Samples the willingness to clearly communicate one's true feelings and opinions even though these expressions may be unpopular or may cause a confrontation with others.

3. Praise-Short (PR-S).—Reflects one's degree of comfort in giving and receiving praise.

4. Requesting Help-Short (RE-S).—Measures the willingness to ask for reasonable favors and help when they are legitimately needed.

5. Refusing Demands-Short (RF-S).—Indicates the willingness to say no to unreasonable or inconvenient demands from others.

Reliability

The reliability characteristics of the Interpersonal Behavior Survey have been determined using a test-retest format over both a two-day and a ten-week period and the coefficients, test and retest means and

1Ibid., p. 4.

2Ibid.
standard deviations, and standard errors of measurement. The reliability studies indicate that the modal test-retest reliability value over both a two-day period and a ten-week period is greater than .90. These indications show good reliabilities for the scale. They are as high or higher than reliability values of other personality inventories in common use.¹

Validity

The definitions of assertive and aggressive behaviors that were used in the development of the Interpersonal Behavior Survey are based on the assumption that assertive and aggressive behaviors form distinct response classes. The intercorrelation matrix contains correlations between the General Aggressiveness, Rational and General Assertiveness scales of -.06 (females) and -.08 (males), and between the General Aggressiveness, Empirical, scales of .10 (females) and .10 (males). All of these correlations are in the predicted low to zero range. This demonstrates that the Interpersonal Behavior Survey measures of assertiveness and aggressiveness are basically independent response classes and support the construct validity of the test.²

Treatment Procedure

The multi-modal treatment procedures were adaptations of the procedures for reduction of stress by Davis and others. These procedures were outlined in their publication entitled The Relaxation and Stress Reduction Workbook. The major focus was placed on the workshop. The workshop consisted of adaptations of the Relaxation and Stress Reduction Workbook.

¹Ibid., p. 12.
²Ibid.
Workbook by Martha Davis, Elizabeth Robbins Eshelman and Matthew McKay. The workbook is a compilation and documentation of some of the important work done in the field of stress reduction. There are simple, concise, step-by-step directions for mastery of stress reduction techniques.\(^1\) A Symptoms Effectiveness Chart and a Stress Awareness Diary were used as monitoring devices. For a more detailed account of the multi-modal treatment procedural steps, the reader is referred to Appendix B. The investigator conducted a training session for a trainer who ran the workshop sessions. Training for the workshop trainee is listed in Appendix B.

The major foci of the treatment workshop were reacting and coping with stress. The schedule of the treatment activities is shown in Table 2.

**Procedure for Implementing the Study**

The procedure for implementing the study was as follows:

1. Obtained permission from the appropriate college official.
2. Reviewed the literature pertinent to this study.
3. Identified the target population and carried out the selection procedures.
4. Obtained informed consent from the target population.
5. Collected pre-test data: Administered the Attitude Scale (Counseling Form B-1) of The Career Maturity Inventory; the Interpersonal Behavior Survey, Part I and Part II; the Schedule of Recent Experience, Part A and Part B; and the Symptoms Checklist.
6. Carried out treatment procedures: Stress Reduction Workshop and mail-outs.
7. Administered posttest, Symptoms Checklist.

\(^1\)Davis, Eshelman, and McKay, Relaxation and Stress Reduction Workbook, p. 1.
<table>
<thead>
<tr>
<th>Session</th>
<th>Activities</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Session</td>
<td>Orientation</td>
<td>2 hours</td>
</tr>
<tr>
<td></td>
<td>Administer Tests: (1) Schedule of Recent Experience, Parts A and B; (2) Symptoms Checklist; (3) The Career Maturity Inventory, Attitude Scale (Counseling Form 3-1); (4) Interpersonal Behavior Survey, Parts I and II</td>
<td></td>
</tr>
<tr>
<td>Day 1</td>
<td>Orientation</td>
<td>1 hour</td>
</tr>
<tr>
<td></td>
<td>I. Introduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phase I. Getting Acquainted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phase II. Presentation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phase III. Define Group Goals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phase IV. Group Identity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phase V. Present Group Rules</td>
<td></td>
</tr>
<tr>
<td>Day 2</td>
<td>Part I. Types and Sources of Stress</td>
<td>1 hour</td>
</tr>
<tr>
<td></td>
<td>Part II. Physiological Indicators</td>
<td>and 35</td>
</tr>
<tr>
<td></td>
<td>Part III. Psychological Indicators Coping Mechanisms</td>
<td>minutes</td>
</tr>
<tr>
<td>Day 3</td>
<td>Review Techniques and Introduce New Ones</td>
<td>1 hour</td>
</tr>
<tr>
<td>Day 4</td>
<td>Review Techniques and Introduce New Ones</td>
<td>1 hour</td>
</tr>
<tr>
<td>Day 5</td>
<td>Evaluation and Termination</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

In summary, the treatment sessions were focused on the psychological and physiological indicators of stress, reacting and coping with stress.
8. Administered post/post test after a 12-day period between post- and post/post tests.

9. The data were organized, analyzed, interpreted, and reported.

10. Summary, findings, conclusions, implications, and recommendations were made and incorporated into the dissertation.

Analysis of Data

The data were collected and analyzed by the investigator in the following manner described below.

Collection of Data

Data were collected from the participants in a pre-, post-, and post/post mode. Data collected from the participants consisted of the following:

1. Mean stress levels of the participants

2. The correlation between stress level and attitude toward career decision-making

3. The mean standard scores on assertiveness for the five subscales of the Interpersonal Behavior Survey, Part I and Part II

4. The differences were determined in treatment effects on the pre-post and pre-post/post stress symptoms status for the experimental, those exposed to a stress reduction workshop; control I, those who received accurate stress reduction information by mail; and control II, the no treatment control group.

5. Levels of extreme discomfort for the groups.

Purpose One

The stress data were collected by administering the Attitude Scale (Counseling Form B-1) of the Career Maturity Inventory; the Interpersonal Behavior Survey, Part I and Part II, respectively; the Schedule of Recent Experience, Part A and Part B; and the Symptoms Checklist for the experimental, control I and control II groups.
Purpose Two

The survey data for the sample population served as the pretest stress data. A post- and post/post treatment administration of the Symptoms Checklist served as the post- and post/post test data for the experimental, control I and control II groups.

Statistical Treatments

Purpose One

Correlational procedures were applied to hypotheses one, two, and three in carrying out Purpose One to determine if statistically significant relationships existed between variables. The Pearson-Product Moment coefficient of correlation was the statistical procedure applied.

Purpose Two

Experimental procedures were applied to hypotheses four through nine in carrying our Purpose Two. The experimental design procedures were used to determine the causal relationship between exposure and non-exposure to experimental treatments. The statistical procedure applied here was the coefficient of determination.

Presentation

The data for this study were displayed in tables and illustrated in figures.
CHAPTER IV

RESULTS AND DISCUSSION

This chapter presents the results of the statistical analyses, descriptive analyses, and discussion relevant to this study.

Data Analysis

The results of the statistical and descriptive analysis of these data are presented under three broad categories. These broad categories are: (1) Attitude Toward Career Maturity and Stress Level--this category included hypothesis one; (2) Interpersonal Behavior and Stress Level--this category included hypotheses two and three; and (3) Changes in Stress Symptoms and Treatment Modes--this category included hypotheses four, five, six, seven, eight, and nine. The division of hypotheses was arrived at based on the manner in which the hypotheses were originally stated in Chapter I and on the nature of the data to be presented. The sample consisted of thirty subjects, ten subjects in each of the three (i.e., experimental, control I and control II) groups.

Attitude Toward Career Maturity and Stress Level

Under the broad category of Attitude Toward Career Maturity and Stress Level, hypothesis one was designed to determine the correlation between stress level and the attitude toward careers of a selected sample of Black female college freshmen who participated in the study.

H₀: There will be no statistically significant correlation between stress levels and the attitudes toward careers of a selected sample of Black female college freshmen living in residence halls.
The results of the data analysis for hypothesis one are shown in Table 3.

**TABLE 3**

CORRELATION BETWEEN MEAN STRESS LEVEL AND SUBSCORES ON THE ATTITUDE SCALE OF THE CAREER MATURITY INVENTORY FOR THE EXPERIMENTAL, CONTROL I AND CONTROL II GROUPS

<table>
<thead>
<tr>
<th>Group</th>
<th>Decisiveness</th>
<th>Involvement</th>
<th>Independence</th>
<th>Orientation</th>
<th>Compromise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>-.39</td>
<td>-.07</td>
<td>.44</td>
<td>-.40</td>
<td>-.03</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control I</td>
<td>-.034</td>
<td>-.04</td>
<td>-.22</td>
<td>.22</td>
<td>.29</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control II</td>
<td>-.07</td>
<td>-.50</td>
<td>-.28</td>
<td>.03</td>
<td>-.43</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An examination of the data in Table 3 indicated that none of the correlations between stress level and the five components of attitude toward career decision-making was statistically significant at the .05 level. Therefore, null hypothesis one as stated, there will be no statistically significant correlation between stress levels and the attitudes toward careers of a selected sample of Black female college freshmen living in residence halls, was accepted.

The comparison between the patterns of levels of attitude toward career decision-making for the three groups is presented in Figure 1.
Figure 1
A Comparison Between Mean Attitudes Toward Career Decision-Making Scores of the Experimental, Control I, and Control II Groups
Employing 12th grade high school norms, the three groups met or exceeded the expected levels in Decisiveness, Involvement, and Orientation. In Compromise, which indicates the inherent flexibility in attitude, the scores for those students, who receiving information by mail, fell slightly below the expected level in independence and compromise. The scores for the no treatment control group also placed them below the expected level in compromise.

**Interpersonal Behavior and Stress Level**

Interpersonal behavior in this study is comprised of aggressive and assertive behaviors. Each has five subscales and was correlated with stress level.

Hypothesis two was designed to determine the correlation between stress level and aggressiveness of a selected sample of Black female college freshmen that participated in the study.

**Aggressiveness and Stress Level**

$H_0^2$: There will be no statistically significant correlation between stress levels and aggressiveness of a selected sample of Black female college freshmen living in residence halls.

An examination of the data in Table 4 indicated that the mean standard scores (T-scores) on aggressiveness for the five subclasses for the experimental, control I, control II groups fell within the normal range (mean of 50 ± 10) with the exception of physical aggressiveness for the experimental group (PH-S = 66) which suggested that this group tended to use or fantasize using physical force as a means of expressing aggressiveness. When the three groups were observed relative to mean stress levels (experimental = 332.80; control I = 370.20; and control II = 320.50), each group's mean exceeded 300 for the past year indicating
that there was almost an 80 percent chance for them to experience problems in the near future relative to stress unless some intervention strategies were implemented.

When stress level was correlated with five subclasses of aggressiveness for the experimental, control I and control II groups, there was no statistically significant correlation for the experimental group. Verbal expression and stress level for the control I group were inversely and statistically related \( (r = -.71) \). General aggressiveness \( (r = -.86) \) and expressions of anger \( (r = -.65) \) as aggressive responses were highly, substantially and inversely related, respectively. The coefficients of determination were 50\%, 74\% and 43\% for verbal expression, general aggressiveness and expression of anger, respectively. Relatively accurate predictions could be made for general aggressiveness based on the control II group data, however, caution should be exercised for expression of anger and verbal expression.

Hypothesis three was designed to determine the correlation between stress levels and assertiveness of a sample of Black female college freshmen who participated in the study.

**Assertiveness and Stress Level**

**\( H_0 \):** There will be no statistically significant correlation between stress levels and assertiveness of a selected sample of Black female college freshmen living in residence halls.

Table 4 contains information about assertiveness.

The results of the data analysis for hypothesis three are shown in Table 5.

An examination of the data in Table 5 indicates that the mean standard scores on assertiveness for the five subclasses for the
<table>
<thead>
<tr>
<th>Group</th>
<th>GGR-S</th>
<th>EA-S</th>
<th>DR-S</th>
<th>VE-S</th>
<th>PH-S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>r</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 10</td>
<td>55.30</td>
<td>8.30</td>
<td>-0.01</td>
<td>51.80</td>
<td>10.75</td>
</tr>
<tr>
<td>M = 332.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD = 147.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control I</td>
<td>44.30</td>
<td>20.41</td>
<td>-.14</td>
<td>54.80</td>
<td>8.92</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 370.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD = 208.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control II</td>
<td>52.10</td>
<td>7.57</td>
<td>.86**</td>
<td>51.10</td>
<td>9.36</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 320.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD = 120.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01

Note:  
GGR-S - General Aggressiveness, Rational - Short  
EA-S - Expressions of Anger - Short  
DR-S - Disregard for Rights - Short  
VE-S - Verbal Aggressiveness - Short  
PH-S - Physical Aggressiveness - Short
TABLE 5

CORRELATION BETWEEN MEAN STRESS LEVEL STANDARD SCORES AND SUBSCORES ON THE ASSERTIVENESS SCALE OF THE INTERPERSONAL BEHAVIOR SURVEY PART 1, PART 2 FOR THE EXPERIMENTAL, CONTROL I AND CONTROL II GROUPS

<table>
<thead>
<tr>
<th>Group</th>
<th>SGR-S</th>
<th>FR-S</th>
<th>PR-S</th>
<th>RE-S</th>
<th>RF-S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>r</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Experimental</td>
<td>49.20</td>
<td>7.52</td>
<td>-.24</td>
<td>54.50</td>
<td>10.00</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 332.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD = 147.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control I</td>
<td>48.20</td>
<td>8.21</td>
<td>.69</td>
<td>51.10</td>
<td>6.79</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 370.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD = 208.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control II</td>
<td>44.20</td>
<td>4.24</td>
<td>.04</td>
<td>47.90</td>
<td>7.05</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 320.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD = 120.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p .05

Note: SGR-S - General Assertiveness, Rational - Short  PR-S - Praise - Short (Giving, Receiving)
FR-S - Frankness - Short  RE-S - Requesting Help - Short
RF-S - Refusing Demands - Short
experimental, control I, control II groups fell within the normal range (mean of 50 ± 10). When the three groups were observed relative to mean stress levels (experimental = 332.80; control I = 370.20; and control II = 320.50), each group's mean exceeded 300 for the past year indicating that there was almost an 80 percent chance for them to experience problems in the near future relative to stress unless some intervention strategies were implemented.

When stress level was correlated with the five subclasses of assertiveness for the experimental, control I and control II groups, there was no statistically significant correlation except for refusing demands for the experimental group (r = -.79) and general assertiveness for control I group (r = .69). Some caution should be exercised in making predictions relative to refusing demands (r² = 62%) and general assertiveness for control I group (r² = 48%).

Changes in Stress Symptoms and Treatment Modes

Hypotheses four through nine were designed to compare the differences in treatment effect on the pre-post and pre-post/post stress symptoms status for the experimental, those exposed to a stress reduction workshop; control I, those who received accurate stress reduction information by mail; and control II, the no treatment control group. The data for hypotheses four through nine were analyzed in three ways and are reported in Figure 2, Tables 6 and 7. Figure 2 illustrates comparisons between the mean number of stress symptoms by groups by categories. Table 6 shows the distribution of reported symptoms that created extreme anxiety. Table 7 shows comparison of the discomfort experienced by stress categories.
Fig. 2 Comparison of the mean number of stress symptoms by groups by categories

- Anxiety In Specific Situations
- Anxiety In Personal Relationships
- Anxiety In General

Observations:
- Pre
- Post
- Post/Post

Graphs show:
- Experimental
- Control I
- Control II

After 12 Days Elapsed
TABLE 6

DISTRIBUTION OF SYMPTOMS REPORTED AS CREATING EXTREME DISCOMFORT IN THE EXPERIMENTAL, CONTROL I AND CONTROL II GROUPS

<table>
<thead>
<tr>
<th>Group</th>
<th>Created Extreme Discomfort In</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Tests</td>
</tr>
<tr>
<td>N = 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Control I</td>
<td>Tests</td>
</tr>
<tr>
<td>N = 10</td>
<td>Deadlines</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Control II</td>
<td>Tests</td>
</tr>
<tr>
<td>N = 10</td>
<td>Interviews</td>
</tr>
</tbody>
</table>

Note: Anxiety Spec. Sit. - Anxiety in Specific Situations
Anxiety Per. Rel. - Anxiety in Personal Relationships
Anxiety Gen. Regardless - Anxiety General - Regardless of Situation or People Involved
<table>
<thead>
<tr>
<th>Group</th>
<th>Stress Categories</th>
<th>Percent of Sample Population by Discomfort Experienced</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pretest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slight to Moderate</td>
</tr>
<tr>
<td>Experimental</td>
<td>Specific Situations</td>
<td>82.5</td>
</tr>
<tr>
<td>N = 10</td>
<td>Personal Rel.</td>
<td>97.5</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>100</td>
</tr>
<tr>
<td>Control I</td>
<td>Specific Situations</td>
<td>75</td>
</tr>
<tr>
<td>N = 10</td>
<td>Personal Rel.</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>100</td>
</tr>
<tr>
<td>Control II</td>
<td>Specific Situations</td>
<td>70</td>
</tr>
<tr>
<td>N = 10</td>
<td>Personal Rel.</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>99</td>
</tr>
</tbody>
</table>

Note: Categories slight to none and moderate discomfort were collapsed for the purposes of this study.
The results of the data analyses for hypothesis four (4) through nine (9) comparing the mean number of stress symptoms reported by groups by categories are shown in Figure 2.

For anxiety in specific situations, the pre-, post-, and post/post tests exhibited a downward trend for experimental group (pre = 2.9, post = 2.4, and post/post = 2.1). For the control I group there was little or no change in the means for the pre-, post-, and post/post tests (pre = 3.4, post = 3.3 and post/post = 4). When the differences between the pre-post and pre-post/post means for the three groups were statistically compared for significance, none of the three was significant at the .05 level of significance. For anxiety in personal relationships, the pre-, post-, and post/post tests exhibited a downward trend for the experimental group (pre = 1.4, post = 1, and post/post = 0.9). For the control I group, there was a downward trend, however, the number of stress symptoms reported at the beginning and at the end exceeded those of the experimental group (pre = 3.6, post = 3.2, and post/post = 2.2). For the control II group, there was an upward trend (pre = 2.8, post = 3.2, and post/post = 4). The differences between the pre-post and pre-post/post means for the three groups were not statistically significant at the .05 level of significance. For anxiety in general—regardless of the situation or the people involved, the pre-, post-, and post/post tests exhibited a sharp downward trend for the experimental group (pre = 10.6, post = 7 and post/post = 3.2). For the control I group there was a sharp downward trend, however, the number of stress symptoms reported exceeded those of the experimental group (pre = 20.5, post = 16.0 and post/post = 5.7). For the control II group there was a slight upward trend in pre- and post-test followed by
a sharp down turn in the post/post test. The means were (pre = 8.7, post = 10 and post/post = 6.8).

The results of the data analyses for hypotheses four (4) through nine (9) comparing the symptom(s) by groups by categories that created extreme discomfort are shown in Table 6.

For anxiety in specific situations, the experimental group reported the anxiety associated with tests as creating extreme discomfort for them; control group I, tests and deadlines; and control group II, tests and anxiety associated with interviews.

The anxiety in personal relationships aspect of the scale was seen as not appropriate by most of the participants. The majority of the responses for this category was reported under "Other." For those who specified what "other" meant to them, the preponderance indicated anxiety associated with relationships with boyfriend.

For anxiety in general—regardless of the situation or the people involved category, the experimental group reported irritability, resentment, fatigue, and "other" as creating the most anxiety; control group I reported fifteen symptoms as creating the most anxiety. Control group II reported other-unspecified as creating the most anxiety.

The results of the data analyses for hypotheses four (4) through nine (9) comparing the degree of discomfort experienced by groups by categories at intervals during the study are shown in Table 7.

The data in this table are presented in percentages for anxiety in specific situations, anxiety in personal relationships and anxiety in general—regardless of the situation or the people involved. For the experimental group, 17.5 percent of the participants reported extreme discomfort associated with specific situations and 2.5 percent reported
extreme discomfort associated with personal relationships on the pretest. None of the participants reported extreme discomfort during the post treatment and post/post treatment phase. Control I group reported 25 percent extreme discomfort in specific situations during the pretest; 10 percent reported extreme discomfort during the post treatment phase and 5 percent during the post/post treatment phase. In personal relationships, 5 percent of the participants in control group I reported extreme discomfort during the pretest and none of the participants reported extreme discomfort during the post and post/post treatment phases. Control II group reported 5 percent extreme discomfort during the pre-, post-, and post/post treatment phases.

In summary, comparing the discomfort experienced by the experimental group, control I group and control II group, there was a reduction in the amount of extreme discomfort reported by experimental group between the pre-, post-, and post/post treatment phases; a lessening in the amount of extreme discomfort reported by the control I group during the pre-, post-, and post/post treatment phases and relatively no change in extreme discomfort reported by the no treatment group during the pre-, post-, and post/post treatment phases.
CHAPTER V

FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This section presents a recapitulation of this study, followed by the findings, conclusions, implications, and recommendations.

Purpose of the Study

The purpose of this study was two-fold: (1) to determine what relationships existed, if any, between the stress level and the career maturity and interpersonal behavior of Black female college freshmen living in college residential halls and (2) to determine the effectiveness of multi-modal treatment approaches in reducing stress in this sample population.

More specifically, the investigator was interested in obtaining answers to the following questions:

1. Is there a statistically significant relationship between mean stress level and the attitudes toward career decision making in a selected sample of Black female college freshmen?

2. Is there a statistically significant relationship between mean stress level and the interpersonal behavior of a selected sample of Black female college freshmen?

3. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen exposed to a structured group workshop and those not exposed?

4. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen who receive stress reduction information by mail and those who do not?

5. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen exposed to a structured group workshop and those who receive stress reduction information by mail?
6. Is there a statistically significant difference between the stress symptom status reported by Black female college freshmen after a two-week time lapse for those exposed to a structured group workshop, those who receive stress reduction information by mail and those who receive no treatment?

**Hypotheses**

Nine null hypotheses were tested. Hypothesis one indicated that there would be no statistically significant correlation between stress level and the attitude toward career decision making of a selected sample of Black female freshmen. Hypothesis two stated that there would be no statistically significant correlation between stress level and aggressiveness of a selected sample of Black female college freshmen. Hypothesis three indicated that there would be no statistically significant correlation between stress level and assertiveness of a sample of Black female college freshmen.

Hypotheses four through nine were designed to compare the differences in treatment effects on the pre-post and pre-post/post means for the experimental (those exposed to a stress reduction workshop), control I (those who received stress reduction information by mail), and control II (the no treatment control) groups.

**Significance of the Study**

The anticipated benefits of the study included, but were not limited to, the following two aspects: (1) it should assist counselors, psychologists, administrators, residence hall and student affairs personnel in positively intervening in the lives of female college freshmen living in residence halls, by providing strategies for reducing their stress status symptoms and (2) it should provide insight into the career and social maturity of female college freshmen as they relate to their
stress levels.

Assumptions

Some basic assumptions were made in designing this study. It was assumed that the participants in this study could show significant reduction in stress level if they were exposed to safe, supportive, experiential activities or received accurate stress reduction information by mail. It was assumed that the phenomenon of regression toward the mean would not favor one group over another since the groups were randomly selected and randomly assigned.

Limitations

The study was confined to a female sample population living in residence halls at an historically Black liberal arts college with an approximate enrollment of 1500 students. Generalizations from the findings of this study should be limited to situations that do not differ significantly. The instruments in the study were of a self-report nature, therefore, the validity of the data was dependent upon the honesty and accuracy of the respondents.

Definition of Terms

The pertinent definition of terms used in this study were:

1. Stress Level.--Operationally, stress level was defined as the score obtained on the Schedule of Recent Experience.

2. Career Maturity.--Operationally, attitude toward career decision making was defined as the score obtained on the attitude subsection of the Career Maturity Inventory.

3. Multi-Modal Treatment.--Was defined as a structured stress reduction workshop, stress reduction information sent through the mail and the absence of treatment.
4. Stress Symptom Status.—Was operationally defined as:
   (1) comparison of mean number of stress symptoms
   reported by groups by categories; (2) variables that
   caused most discomfort by groups; and (3) comparisons
   of percent of population experiencing degrees of dis-
   comfort by categories during the course of the study.

Review of Related Literature

The review of the related literature in this study consisted of
five sections. They were: (1) Definitions and Nature of Stress, which
included seven subcategories; (2) Stress and Black College Students; (3)
Residential Living and Stress; (4) Career Maturity and Stress; and (5)
Interpersonal Behavior and Stress.

The relationship between stress levels and career maturity and
interpersonal behavior, as they affect Black female college freshmen
living in residence halls, was studied. Problems that appeared stressful
and seemed to surface frequently in the literature range from traumatic
loss or injury to absence of friendship.

Method and Procedure

This chapter presented the research design, sample and selection
procedures for implementing the study and analyzing the data for the
study.

Research Design

Correlational procedures were applied to hypotheses one, two and
three to determine if statistically significant relationships existed
between variables.

Experimental procedures were applied to hypotheses four through
nine in carrying our Purpose Two. The experimental design procedures
were employed to determine the causal relation between exposure to
experimental treatments: a structured workshop designed to reduce stress (experimental) and accurate stress reduction information by mail (control I), and the stress level in a non-treatment control group (control II).

Sample

The sample consisted of thirty Black female college freshmen living in residence halls at a southeastern historically Black institution.

Instruments

The instruments used in this study were the Schedule of Recent Experience, Part A and Part B, the Symptoms Checklist, the Attitude Scale (Counseling Form B-1) of the Career Maturity Inventory and the Interpersonal Behavior Survey.

Treatment

The treatment procedures consisted of a five-session stress reduction workshop. Three additional sessions were allowed for a pre-, post- and post/post testing administration. Accurate stress reduction information was sent through the mail and one group was tested but received no treatment.

Findings

A thorough analysis of the data acquired from this study produced the following findings:

1. None of the correlations between stress level and the five components of attitude toward career decision making was statistically significant at the .05 level. Therefore, null hypothesis one was accepted.

2. The correlation between stress levels and assertiveness for the groups showed there was no statistically significant correlation except for two subclasses.
3. There was a reduction in the amount of discomfort experienced as a result of the treatment phases for the groups, however, for the no treatment group, there was practically no change.

Conclusions

Based on the findings of the study, the following conclusions seemed warranted:

1. Irrespective of the mode of stress reduction treatment that Black female college freshmen were exposed to, they tended to experience decreasing tendencies in attitude toward career decision-making with increases in stress levels though not to a statistically significant degree.

2. Black female college freshmen tended to exhibit a general decrease in aggressiveness with increases in stress levels. Those who received accurate stress reduction information by mail appeared to refrain from using words as weapons by doing such things as making fun of others, criticizing and putting others down causing increases in stress. The responses of those who received no treatment tended to show a decrease in their general aggressiveness, in tendency to lose their temper and to express anger in a direct forceful manner with an increase in stress level.

3. Black female college freshmen, exposed to a structured stress reduction workshop, tended to exhibit a general decrease in assertive behavior with increases in stress. With increases in stress levels, these students tended to be less willing to say "No" to unreasonable or inconvenient demands from others. Those students who received accurate stress information by mail tended to demonstrate low general assertiveness accompanied by slight increases in stress levels. Students receiving no treatment tended to exhibit low levels of assertiveness with increases in stress levels.

Implications

The following implications seem to be inherent in the conclusions drawn from the findings obtained from this study:

1. There may be significant variables other than career maturity and interpersonal behavior that could be used in helping students reduce stress and increase their awareness of the effects of stress and distress.
2. Reactions and responses of the participants indicated that modifications in this research might be helpful in providing intervention strategies.

Recommendations

The implications made from the conclusions drawn in this study seem to warrant the following recommendations:

1. Future research should continue to focus on the target population in the implementation of structured intervention strategies in order to help individuals reduce their levels of stress.

2. More studies should be conducted relative to career development among Black female college freshmen, especially in higher education.

3. Use should be made of intervention strategies utilizing multi-modal treatment procedures.

4. Higher education should initiate programs to help students reduce test anxiety and improve coping skills.
APPENDIXES
APPENDIX A

CORRESPONDENCES
Ms. Jamie V. Mitchell  
1310 Aniwaka Avenue, S.W.  
Atlanta, Georgia 30311  

Dear Ms. Mitchell:  

Pursuant to our conversation concerning the possibility of conducting a one week Stress Reduction Workshop with the female freshmen residing in residence halls, I am pleased that such an effort is being made to help in the awareness of our students in their over all growth and development.  

I understand that there will be additional periods of assessment procedures. The necessary individuals have been informed of these arrangements, therefore, permission is granted to conduct the Stress Reduction Workshop and the additional assessment periods.  

Please feel free to call upon me for any assistance that I might be able to provide.  

Sincerely,  

Mary A. Ware  
Mrs. Mary A. Ware  
Associate Dean for Student Development
STATEMENT OF INFORMED CONSENT

Dear __________________________,

You have been selected to participate in group activities for stress reduction. The purpose of these activities is two-fold: (1) to determine what relation exists, if any, between the stress level and the career maturity and interpersonal behavior of Black female college freshmen residing in residence halls and (2) to determine the effectiveness of multi-modal treatment approaches in reducing stress in this sample population.

The activities will be held in seven sessions beginning April 8, 1986 and ending on April 28, 1986. Three of the seven sessions will involve assessment procedures. These assessment procedures will be conducted on April 8, 1986, April 15, 1986 and April 28, 1986. These assessment procedures will involve your taking four inventories. The group activities will involve discussions, techniques for reducing stress, hand out assignments, and participating in exercises that are designed to help you better understand the problems associated with stress. No activities are planned that may cause physical or psychological injury to occur.

You may be assured that any results generated during the implementation of this project will be kept confidential. Group members' names will be converted into numerical codes for identification purposes. All information will be reported as group findings.

It is expected that your personal growth and understanding of stress reduction will be highly rewarding. In addition, your participation in the project may contribute much in the way of helping other students who have similar experiences.

Should you have questions about the project or need more information, you may contact me in the Counseling Department, Atlanta University (681-0251, Ext. 215).

Thank you for your willingness to participate.

Sincerely,

Jamie Virginia Mitchell
STATEMENT OF INFORMED CONSENT

I have read and do understand the information regarding my participation in the six sessions of the Stress Reduction Workshop activities, and do CONSENT to my involvement in the project.

[Signature]
Date
Signed - Participant's Name

[Signature]
Date
Witness
MEMORANDUM

TO: Participants
FROM: Jamie V. Mitchell
RE: Schedule of Stress Reduction Activities
DATE: April 7, 1986

The following information pertains to the date, time, and place for the Stress Reduction Activities:

Place - - - Merner Hall, Main Lounge
Time - - - 7:00 p.m.
Dates - - - Tuesday, April 8, 1986
       Wednesday, April 9, 1986
       Thursday, April 10, 1986
       Friday, April 11, 1986
       Monday, April 14, 1986
       Tuesday, April 15, 1986
       Monday, April 28, 1986

Thank you for your participation.
MEMORANDUM

TO: Participants
FROM: Jamie V. Mitchell
RE: Schedule of Stress Reduction Activities
DATE: April 7, 1986

The following information pertains to the date, time, and place for the Stress Reduction Activities:

Place - - - Merner Hall, Main Lounge
Time - - - 7:00 p.m.
Dates - - - Tuesday, April 8, 1986
   Tuesday, April 15, 1986
   Monday, April 28, 1986

Thank you for your participation.
Dear Participant,

I am extremely pleased that you have been selected as a participant in the Stress Reduction Activities. My sincere congratulations and appreciation are extended to you.

Through your participation and experiences, it is hoped that these activities will prove fruitful and rewarding. These activities should aid and assist you in your preparation for your upcoming final examinations.

Enclosed is a schedule of the sessions in which you are to participate. Thank you for your consideration, concern and participation.

Sincerely,

Jamie Virginia Mitchell
Dear Participant,

Thank you for your concern and interest in the Stress Reduction Activities. Enclosed is a schedule of the sessions in which you are to participate.

I am extremely hopeful that you will continue to show the same enthusiasm and concern displayed at our initial session.

I wish you the best in your educational and personal growth and success.

Sincerely,

Jamie Virginia Mitchell
Dear Participant:

Enclosed in this package is an overview of the major causes of stress and a program-by-program breakdown of various techniques on stress reduction. This information can be used effectively for your personal reaction to stress.

The information may be particularly useful in your preparation for your upcoming final examinations. Many of the techniques described in this program may prove fruitful and rewarding.

A basic premise of this program is that the benefits of relaxation and stress reduction techniques can only be fully realized after they have been practiced regularly. Choose a quiet place where you will not be interrupted to learn the techniques. Since this may be a new activity for you, it may be wise to explain to others around you what you are doing. Others tend to be very supportive of these exercises once they understand what you are doing and why.

The purpose of regular practice is two-fold. First, it will ensure that you will be able to consciously carry out the exercise instructions anytime you need to, without having to refer to written materials. Secondly, regular practice will develop the habit of relaxing at an unconscious level.

Thank you for your cooperation and participation.

Sincerely,

Jamie Virginia Mitchell
APPENDIX B

TRAINING OF THE WORKSHOP TRAINEE
AND
TREATMENT PROCEDURE
Training of the Workshop Trainee

The stress reduction management training process followed those step-by-step directions for the techniques that were utilized in the study. The directions were implemented following the guide in *The Relaxation and Stress Reduction Workbook* by Davis, Eshelman, and McKay. The training phase covered a three-day, one hour per day period.

The training followed the workbook with adaptations made by the investigator for groups. The training process was conducted by the investigator to an advanced graduate student who had both classwork and supervised experiences in group work. The training took place in a room of the University Counseling Department.

**Procedural Steps**

**Day 1:**
- A. Review test instructions, manuals, and workbook materials.
- B. Review instructions for stress techniques.

**Day 2:**
- A. Practice techniques on the investigator (trainer).
- B. Question and answer period.

**Day 3:**
- A. Assessment and evaluation
- B. Try out procedures on investigator
- C. Question and answer session.
Treatment Procedures--Stress Reduction Workshop

In view of the aforementioned, the purpose of these sessions was to expose the group members to different ways and means of reducing stress factors, and also how to cope with stress. In addition, efforts were made to acquaint the members with fruitful ways toward stress management.

Program

Session I: Day 1.

Orientation

The orientation will consist of the following five (5) phases:

Phase I

Getting acquainted. During this phase an icebreaker will be implemented. "Getting to know you," . . . each member will introduce herself to the member next to her and tell her some pertinent background information about herself. The individual will then try to repeat everything or essential aspects of what the member told her.

Phase II

Presentation of Group Expectations.

Phase III

Define group goals and subgoals that will implement individual behavioral objectives.

Phase IV

Group Identity. The members will share an image of the group.

Phase V

Present ground rules.

Session II: Day 2. - Part I

Topic

Some Types and Sources of Stress
Overview

Life would be simple indeed if one's biological and psychological needs were automatically gratified. However, there are many obstacles, both environmental and internal, that interfere with need gratification. Such obstacles place adjustive demands, or stress, on the individual.

Objective I

The group will be able to identify and know the different types of adjustive demands commonly experienced by the individual, but will also recognize the unique and changing patterns of such demands.

Objective II

The members will recognize that sources of stress may not only stem from goal-blocking frustrations and conflicts, but also from pressures to achieve particular goals or to behave in particular ways.

Procedural Steps

1. Mini-lectures on (1) frustration, (2) conflicts and pressure, and (3) body awareness.

Wrap-up and Evaluation

2. Summarization.

Break: 5 minutes

Session II: Day 2. - Part II

Topic

Physiological Indicators

Overview

In this session we shall examine the "costs" of stress for the human system, including biological/physiological aspects that are commonly encountered in contemporary life.
Objective I

The group members will know some of the many biological conditions associated with stress - infections, physical trauma, disease, malnutrition, fatigue - and how they may lower the individual's stress tolerance and act as predisposing causes in mental disorders.

Procedural Steps

1. Mini-lecture
2. Chart presentation
3. Coping Mechanisms -- Breathing and Progressive Relaxation

Wrap-up and Evaluation

1. Elicit feedback
2. Give home work
3. Summarization

Session II: Day 2. - Part III

Topic

Psychological Indicators

Overview

The severity of stress depends both on the individual's resources and on the nature of the adjustive demands. In this session we are concerned with psychological factors.

Objective I

The group members will be able to identify those indicators that are psychologically based.

Procedural Steps

1. Demonstrations and presentations
2. Give a self-evaluation questionnaire.
3. Discussion on commonly encountered factors in contemporary life. Coping Mechanisms -- Thought Stopping, Refuting Irrational Ideas

Wrap-up and Evaluation

1. Role play
2. Summarization

Session III: Day 3.

Topic

Review of Coping Mechanisms Introduced in Previous Sessions
Introduction of New Coping Mechanism

Overview

Since stress, beyond a minimal level, threatens the well-being of the organism, it engenders automatic, persistent attempts at its resolution; it forces a person to do something about it. What is done depends on many factors, including one's frame of reference, motives, competencies, stress tolerance, environmental limitations and supports, and momentary conditions like prior mental set or fatigue.

In this session we will be involved in coping with adjustive demands. Also, becoming acquainted with a new coping mechanism (meditation). Through meditation you learn to focus uncritically on one thing at a time. This is a kind of self discipline which increases effectiveness in setting and achieving goals, and improves self-esteem.1

Objective I

The group will know how to outline various steps involved in coping with adjustive demands.

Objective II

The group, through re-enforcement of previous techniques and thought demonstrations by group members, will be able to identify previous techniques and be able to work more effectively with them.

Objective III

The group will be able to recognize that any stress reaction, of course, reflects the interplay of a combination of determinants—some more influential than others—but all working together to make the individual react as he does.

Procedural Steps

1. Presentation of materials (Lotus of a Thousand Petals).
2. Mini-lecture

Wrap-up and Evaluation

1. Elicit feedback
2. Summarization

---

Session IV: Day 4.

Topic

Review of Coping Mechanism Introduced in Previous Sessions
Introduction of New Coping Mechanism

Overview

Discuss previous techniques. Question and answer phase.

In this session you will become acquainted with an enormously powerful way to reduce stress (your imagination).

Objective I

The group will become more familiar with previous techniques. The group will be able to identify and know particular ways and means of coping with these aspects.

Procedural Steps

1. Elicit feedback
2. Summarization

Wrap-up and Evaluation

1. Practice techniques
2. Giving and receiving feedback

Session V: Day 5.

Evaluation and Termination

Procedural Steps

1. Administer posttest (Symptoms Checklist).
APPENDIX C

STRESS REDUCTION INFORMATION
SENT THROUGH THE MAIL
STRESS REDUCTION ACTIVITIES ARE BEGINNING (HURRAY!!) AND THERE'S GOOD--GOOD NEWS ABOUT.

1. The Major Causes of Stress
2. Stress Reduction Techniques
3. Preventive Measures
4. Body Awareness

AND MUCH MORE! READ ABOUT IT
STRESS REDUCTION ACTIVITIES

DIRECTIONS: Read each page carefully. For the stress reduction techniques, develop an outline for the techniques you are going to practice, using your stress awareness diary. You may also want to use your stress awareness diary for all of your stress activities.

Brief Overview of Stress

According to Hans Selye, "stress is the nonspecific response of the body to any demand made upon it." (Selye, 1956).

Good things (for example, all A's on your final examinations) to which one must adapt is termed eustress, and bad things (for example, getting fired from a job), to which we must adapt is termed distress; both are experienced the same physiologically.

Stress can also be viewed as an arousal reaction to some stimulus, be it an event, object, or person. This stress reaction is characterized by heightened arousal of physiological and psychological processes. The stimulus that causes this arousal reaction is the stressor. Stressors may be divided into three general classes: (Girdano, 1979).

1. Psychosocial causes.--These stressors are a function of the complex interaction between social behavior and the way our senses and our minds interpret those behaviors.

2. Bioecological causes.--These stressors basically are biologically related and may arise out of our relationship with our environment.

3. Personality causes.--These reflect the dynamics of an individual's self-perception and characteristic attitudes and behaviors which may somehow contribute to excessive stress.
PREVENTIVE MEASURES

The first step in reducing stress is to become aware of the major ongoing environmental stresses in your life. You are likely to underestimate how many stressful changes occur every day to which you are forced to adjust. In order to become aware of the amount of stress you have had in your daily life, please utilize your Stress Awareness Diary.

The following suggestions can help you in scheduling and for keeping abreast of the events:

1. Become familiar with the life events and the amount of change they require.
2. Put your checklist where you can see it easily several times a day.
3. With practice you can recognize when a life event happens.
4. Think about the meaning of the event for you and try to identify some of the feelings you experience.
5. Think about the different ways you might best adjust to the event.
6. Take your time in arriving at decisions.
7. If possible, anticipate life changes and plan for them well in advance.
8. Pace yourself. It can be done even if you are in a hurry.
9. Look at the accomplishment of a task as a part of daily living and avoid looking at such an achievement as a stopping point or a time for letting down.
You can significantly reduce stress with something enormously powerful: your imagination.

TIME FOR MASTERY:

Symptom relief can be immediate or take several weeks of practice.

INSTRUCTIONS:

Three modes of stimulating your imagination are: visualization, guided imagery and listening to music.

1. Visualization.--Close your eyes--give your tension or pain a color and a shape--pause, now change the shape and color of your tension, push this second shape and color away until it is out of your awareness.

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3. Listening to Music.--It is important that you select music that you find peaceful and soothing. To get the most out of your music session, find one half hour of uninterrupted time alone. Put on the music you have chosen, settle back in a comfortable position and close your eyes. Mentally scan your body. Be aware of your mood as you focus your attention on the music. Each time an unrelated thought enters your head, note it and then discard it, remembering your goal of focusing on the music and relaxing. When the music ends, allow your mind to again scan your body and become aware of how it feels. Is there any difference compared to how your body felt before you started? Is there any difference in mood from before you started?
LOTUS OF A THOUSAND PETALS

As the name suggests, this is a form of meditation borrowed from eastern mystics. A picture of the Lotus appears on your cover page.

A. The many-petaled lotus flower in eastern thought is a symbol representing the inter-connectedness of everything in the universe.

B. Center yourself in your quiet place.

C. Choose a word, image or concept to be the center of the lotus. For at least the first two weeks of practicing this meditation, select positive words such as calm, friends or happiness to induce a positive mood.

D. Eventually an association to your word will occur to you. Imagine the associated word or idea as one of the petals attached to the central word of the lotus. Look at the two words and the connection between them for about seven seconds. Do not force an understanding. The connection is either spontaneously clear to you or it may make no sense to you at all. In either case, return to the central word and wait for the next association.

E. Continue in this manner for about ten minutes a day for three weeks. Afterwards, shift to 20 or 30 minutes a day for three weeks, at which time you may decide to drop it or continue it as part of your regular meditation program.

F. Remember that your major objective in practicing this form of meditation is to develop self-discipline, not achieve great insights. Becoming preoccupied with interesting associations is one of the major blocks to this form of meditation.
BODY AWARENESS

Most people are more aware of the weather, the time of day or their bank balance than they are aware of the tension in their own bodies. Body awareness is the first step in recognizing and reducing stress.

Gestalt Therapy of Fritz Perls and the Bioenergetic Therapy of Alexander Lowen—both of these therapies work closely with the mind-body relationship and emphasize the notion that the body registers stress long before the conscious mind does. Muscular tension is your body's way of letting you know you are under stress (Davis et al., 1982).

Chronic muscular tension occurs in people with particular attitudes which tend to tighten specific muscle groups. For example, an individual experiencing a lot of anxiety about the future may develop chronic stomach problems. This chronic muscular tension restricts digestion, limits self expression and decreases energy. Every contracted muscle blocks movement.

According to Perls, differentiating between your external awareness and internal awareness in order to separate the world from your physical reaction to it is important. External awareness includes all stimulation to the five senses from the outside world. Internal awareness refers to any physical sensation, feeling emotional discomfort or comfort inside your body. Much of the tension in your body isn't felt because most of your awareness is directed to the outside world. In the Body Inventory, you will experience Gestalt exercises designed to locate and explore your body tension.
BODY INVENTORY

The following exercises promote body awareness, and will help you identify areas of tension.

**Awareness**

1. First focus your attention on the outside world. Start sentences with, "I am aware of..." (e.g., "I am aware of the cars going by outside the window, papers moving, the coffee perking, the breeze blowing and the blue carpet.")

2. After you have become aware of everything that is going on around you, shift to focusing your attention on your body and your physical sensations, your internal world (e.g., "I am aware of feeling warm, my stomach gurgling, tension in my neck, nose tickling, and a cramp in my foot.")

3. Shuttle back and forth between internal and external awareness (e.g., "I am aware of the chair pushing into my buttocks, the circle of yellow light from the lamp, my shoulders hunching up, the smell of bacon.")

4. Used at free moments throughout the day, this exercise allows you to separate and appreciate the real difference between your inner and outer worlds.

**Body Scanning**

Close your eyes...Start with your toes and move up your body... Ask yourself, "Where am I tense?"...Whenever you discover a tense area, exaggerate it slightly so you can become aware of it...Be aware of the muscles in your body that are tense...Then for example, say to yourself, "I am tensing my neck muscles...I am hurting myself...I am creating tension in my body"...Note that all muscular tension is self-produced... At this point, be aware of any life situation that may be causing the tension in your body and what you could do to change it.

**Letting Go of Your Body**

Lie down on a rug or firm bed and get comfortable...Pull your feet up until your feet rest flat on the floor...Close your eyes...Check yourself for comfort...This may require shifting your body around...Become aware of your breathing...Feel the air move into your nose, mouth and down your throat into your lungs...Focus on your body and let all of the parts come into your awareness spontaneously...What parts of your body
come into awareness first?...What parts are you less aware of?...Become aware of which parts of your body you can easily feel and which parts of your body have little sensation...Do you notice any difference between the right and left side of your body?...Now become aware of any physical discomfort you are feeling...Become aware of this discomfort until you can describe it in detail...Focus and be aware of what happens to this discomfort...It may change...Let your body do whatever it wants to do...Continue this for five to ten minutes...Allow your body to take over.

STRESS AWARENESS DIARY

Some parts of the day are more stressful than others, and some stressful events are more likely to produce physical and emotional symptoms than others. Certain types of stressful events often produce characteristic symptoms. It is useful to keep a record of stressful events as well as symptoms that may have been a stress reaction.

Keep a stress awareness diary for two weeks. Make a note of the time that a stressful event occurs and the time you notice a physical or emotional symptom that could be related to the stress.

The following stress awareness diary is from the Monday of a department store clerk:

<table>
<thead>
<tr>
<th>Time</th>
<th>Stressful Event</th>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Alarm doesn't go off, late rushing</td>
<td>Slight headache</td>
</tr>
<tr>
<td>9:30</td>
<td>Customer is rude and insulting</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td></td>
<td>Anger, tightness in stomach</td>
</tr>
<tr>
<td>11:15</td>
<td>Return of 3 big ticket items, much paper work</td>
<td>Depression, slight headache</td>
</tr>
<tr>
<td>3:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:15</td>
<td>Heavy commute traffic</td>
<td></td>
</tr>
<tr>
<td>5:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:35</td>
<td>Wife defends son</td>
<td>Irritable with son, tightness in stomach</td>
</tr>
</tbody>
</table>
After using these body awareness exercises, you will begin to recognize where your body stores muscular tension. When you allow yourself increased awareness, you can find ways to let go of the tension you discover. Along with the release of tension, you will experience increased energy and a sense of well-being.

After your stress awareness diary has helped you identify your reactions to stress, you should continue to record your progress with the other relaxation techniques. To keep a convenient record of how you feel before and after your relaxation exercises, use the following record of general tension.

Record of General Tension

Rate yourself on this 10-point scale before and after you do your relaxation exercise.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>totally relaxed no tension</td>
<td>very relaxed</td>
<td>moderately relaxed</td>
<td>fairly relaxed</td>
<td>slightly relaxed</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>slightly tense</td>
<td>fairly tense</td>
<td>moderately tense</td>
<td>very tense</td>
<td>extremely tense (the most uncomfortable you could be)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week of</th>
<th>before session</th>
<th>after session</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
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<tr>
<td>Sunday</td>
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</table>
As you can see, the diary identifies how particular stresses result in predictable symptoms. Interpersonal confrontations may characteristically be followed by stomach tension. Rushing may be causing vasoconstriction (tightening of the blood vessels) for this individual, and therefore result in irritability and headaches. You can use your stress awareness diary to discover and chart your stressful events and characteristic reactions.

<table>
<thead>
<tr>
<th>Stress Awareness Diary</th>
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<tbody>
<tr>
<td>Date</td>
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<td>Time</td>
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</tbody>
</table>

100
**Daily Diary**

**Time**

Opportunity to exercise

Reasons to exercise or not
Technique  

THOUGHT STOPPING

Thought stopping can help you overcome the nagging worry and doubt which stands in the way of relaxation. Thought stopping involves concentrating on the unwanted thoughts and, after a short time, suddenly stopping and emptying your mind.

TIME FOR MASTERY:

For effective mastery, thought stopping must be practiced conscientiously throughout the day for three days to one week.

INSTRUCTIONS:

1. Explore and list your stressful thoughts.
2. Ask yourself these questions about each stressful thought you listed. Is the thought realistic or unrealistic?
3. Close your eyes and bring into imagination a situation in which the stressful thought is likely to occur. Try to include normal as well as obsessive thinking. In this way, you can interrupt the stressful thoughts while allowing a continuing flow of healthy thinking.

Technique  

PROGRESSIVE RELAXATION

You cannot have the feeling of warm well-being in your body and at the same time experience psychological stress. Progressive relaxation of your muscles reduces pulse rate and blood pressure as well as decreasing perspiration and respiration rates. Deep muscle relaxation, when successfully mastered, can be used as an anti-anxiety pill.

TIME FOR MASTERY:

One to two weeks. Two 15-minute sessions per day.

INSTRUCTIONS:

The following is a procedure for achieving deep muscle relaxation quickly. Repeat each procedure at least once, tensing each muscle group from five to seven seconds and then relaxing from 20 to 30 seconds. Remember to notice the contrast between the sensations of tension and relaxation.

2. Wrinkle up forehead. At the same time, press your head as far back as possible, roll it clockwise in a complete circle, reverse. Now wrinkle up the muscles of your face like a walnut: frowning, eyes squinted, lips pursed, tongue pressing the roof of the mouth, and shoulders hunched.
Relax.


Technique

BREATHING

Breathing is essential for life. Proper breathing is an antidote to stress.

TIME FOR MASTERY:

While a breathing exercise can be learned in a matter of minutes, and some immediate benefits experienced, the profound effects of the exercise may not be appreciated until months of persistent practice have passed.

INSTRUCTIONS:

When you have bent over your work for several hours and are feeling tense, this exercise will relax you and make you more alert.

1. Stand up straight with your arms out in front of you.

2. Inhale and hold a complete natural breath.

3. Swing your arms backward in a circle several times and then reverse directions. For variety, try rotating them alternately like a windmill.

4. Exhale forcefully through your mouth.

5. Practice a couple of purifying breaths.

6. Repeat this exercise as often as you like.
Meditation has been found effective in creating a state of deep relaxation in a relatively short time.

**TIME FOR MASTERY:**

A meditative exercise can be learned in one session and some immediate pleasure and relief experienced. However, it must be practiced for at least one month in order to experience the more profound effects.

**INSTRUCTIONS:**

It is important, particularly when first learning to meditate, to be in a quiet place. Establish your posture, select a position that is comfortable to you. It is very useful to focus on the same thought or emotion for several sessions, each day bringing new insights.

The following page includes an exercise that you might find useful.

Through meditation you learn to focus uncritically on one thing at a time. This is a kind of self-discipline which increases effectiveness in setting and achieving goals, and improves self-esteem.

The most essential element to experiencing relaxation in meditation is maintaining a passive attitude. For a while, thoughts and distractions can be cleared from the mind. When these thoughts re-occur, they needn't be a bother. They can be noted and let go of, as you return to the chosen object of focus. The passive attitude includes a lack of concern about how well you are doing. It means feeling, uncritically, yourself in the present.

Meditation is encouraged by choosing a comfortable position that can be held for about 20 minutes without causing stress. Avoid meditating within two hours of a heavy meal, since digestion interferes with your ability to remain relaxed and alert.

**IMAGINATION**

You can significantly reduce stress with something enormously powerful: your imagination.

**TIME FOR MASTERY:**

Symptom relief can be immediate or take several weeks of practice.

**INSTRUCTIONS:**

Three modes of stimulating your imagination are: visualization, guided imagery and listening to music.
1. **Visualization.**--Close your eyes--give your tension or pain a color and a shape--pause, now change the shape and color of your tension, push this second shape and color away until it is out of your awareness.

2. **Guided Imagery.**--The elements of guided imagery include finding a comfortable position, closing your eyes, focusing on your physical sensations and practicing deep breathing. One way to create your own guided imagery is to pay attention to whatever fantasy occurs to you at the moment.

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TWO WEEKS GOALS

Monday ____________________________________________

Tuesday ____________________________________________

Wednesday __________________________________________

Thursday ____________________________________________

Friday ______________________________________________

Saturday ______________________________________________

Sunday ______________________________________________

Monday ____________________________________________

Tuesday ____________________________________________

Wednesday __________________________________________

Thursday ____________________________________________

Friday ______________________________________________

Saturday ______________________________________________

Sunday ______________________________________________

Signature

At the end of two weeks, examine your progress. Use your experience in accomplishing or falling short of your goals to devise another set of two-week goals. Keep up this cycle until you have established the habit of regular exercise.
SYMPTOM EFFECTIVENESS CHART

DIRECTIONS:

Now that you have identified your stress related symptoms, it is time to choose the one or two that bother you the most, and to select the techniques that you will use to relieve them. Since everyone reacts differently to stress, it is hard to say which stress reduction techniques will be best for you. However, this chart which follows on the next page (page 108) will give you a general idea of what to try first, and where to go from there.

Chapter headings for each stress reduction method are across the top, and typical stress-related symptoms are listed down the side. You may have only one or several of these symptoms.

As you can see, more than one stress reduction technique is indicated as effective in treating most symptoms. The most effective techniques for a particular symptom are marked with a boldface X, while other helpful techniques for that same symptom are indicated by a lighter x.

IMPORTANT: PHYSICAL SYMPTOMS MAY HAVE PURELY PHYSIOLOGICAL CAUSES. YOU SHOULD HAVE A MEDICAL DOCTOR ELIMINATE THE POSSIBILITY OF SUCH PHYSICAL PROBLEMS BEFORE YOU PROCEED ON THE ASSUMPTION THAT YOUR SYMPTOMS ARE COMPLETELY STRESS-RELATED.
<table>
<thead>
<tr>
<th>SYMPTOMS CHECKLIST</th>
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<tbody>
<tr>
<td><strong>SYMPTOMS</strong></td>
</tr>
<tr>
<td>ANXIETY IN SPECIFIC SITUATIONS (TESTS, DEADLINES, INTERVIEWS)</td>
</tr>
<tr>
<td>ANXIETY IN YOUR PERSONAL RELATIONSHIPS (SPOUSE, PARENTS, CHILDREN, ETC.)</td>
</tr>
<tr>
<td>DEPRESSION, HOPELESSNESS, POWERLESSNESS, POOR SELF-ESTEEM</td>
</tr>
<tr>
<td>HOSTILITY, ANGER, IRRITABILITY, RESENTMENT</td>
</tr>
<tr>
<td>PHOBIAS, FEARS</td>
</tr>
<tr>
<td>OBSESSIONS, UNWANTED THOUGHTS</td>
</tr>
<tr>
<td>MUSCULAR TENSION</td>
</tr>
<tr>
<td>HIGH BLOOD PRESS.</td>
</tr>
<tr>
<td>HEADACHES, NECKACHES, BACKACHES</td>
</tr>
<tr>
<td>INDIGESTION, IRRITABLE BOWEL, ULCERS, CHRONIC CONSTIPATION</td>
</tr>
<tr>
<td>MUSCLE SPASMS, TICS, TREMORS</td>
</tr>
</tbody>
</table>
Refuting Irrational Ideas

There are five steps (A through E) to disputing and eliminating irrational ideas. Start by selecting a situation that consistently generates stressful emotions in you.

A. Write down the facts of the event as they occurred at the time you were upset. Be certain to include only the objective facts, not conjecture, subjective impressions or value judgements.

B. Write down your self-talk about the event. State all your subjective value judgements, assumptions, beliefs, predictions and worries. Note which self statements have been previously described as irrational ideas.

C. Focus on your emotional response. Make a clear one or two-word label such as angry, depressed, felt worthless, afraid, etc.

D. Dispute and change the irrational self-talk identified at step B. Here's how it is done, according to Ellis:

1. Select the irrational idea that you wish to dispute. As an illustration, we will use the irrational idea, "It's not fair that I have to suffer with such a problem."

2. Is there any rational support for this idea? Since everything is as it should be, given long chains of cause and effect, the answer is no. The problem must be endured and dealt with because it happened. It happened because all the conditions existed necessary to make it happen.

3. What evidence exists for the falseness of this idea?
   a. There are no laws of the universe that say I shouldn't have pain or problems. I can experience any problem for which the necessary conditions exist.
   b. Life is not fair. Life is just a sequence of events, some of which bring pleasure and some of which are inconvenient and painful.
   c. If problems occur, it is up to me to solve them.
   d. Trying to keep a problem from developing is adaptative, but resenting and not facing it once it exists is a dangerous strategy.
e. No one is special. Some go through life with relatively less pain than I do. This is due to one of two things: Luck of the draw, or decisions I have made that contributed to the necessary conditions for my problems.

f. Just because I have a problem doesn't mean I have to suffer. I can take pride in the challenge of a creative solution. This may be an opportunity to increase my self esteem.

4. Does any evidence exist for the truth of this idea?

No, my suffering is due to my self-talk, how I have interpreted this event. I have convinced myself that I should be unhappy.

5. What is the worst thing that could happen to me if what I want to happen doesn't, or what I don't want to happen does?

a. I could be deprived of various pleasures while I deal with the problem.

b. I might feel inconvenienced.

c. I might never solve the problem, and experience myself as ineffective in this particular area.

d. I might have to accept the consequences of failure.

e. Others might not approve of how I am behaving. I might be rejected as incompetent.

f. I might feel more stress, tension and a sense of being up against it.

6. What good things might occur if what you want to happen doesn't, or what you don't want to happen does?

a. I might learn to tolerate frustration better.

b. I might improve my coping skills.

c. I might become more responsible.

E. Substitute alternative self-talk, now that you have clearly examined the irrational idea and compared it with rational thinking.

1. There’s nothing special about me. I can accept painful situations when they emerge.
2. Facing the problem is more adaptive than resenting it or running away from it.

3. I feel what I think. If I don't think negative thoughts, I won't feel stressful emotions. At worst I will experience inconvenience, regret and annoyance -- not anxiety, depression, and rage.

Homework

To succeed in your war against irrational ideas, you need a daily commitment to homework. Use the homework sheet below as a model. Fill one out at least once a day.

Here is an example of a homework sheet completed by a woman who had a date with a friend cancelled:

A. Activating Event:
A friend cancelled a date with me.

B. Rational Ideas:
I know he's under a lot of time pressure right now. I'll do something by myself.

Irrational Ideas:
I'll feel terribly alone tonight...The emptiness is setting in...He doesn't really care for me...No one really wants to spend time with me...I'm falling apart.

C. Consequences of the irrational ideas:
I was depressed...I was moderately anxious.

D. Disputing and challenging the irrational ideas:
1. Select the irrational idea:
I'll feel terribly alone tonight...I'm falling apart.

2. Is there any rational support for this idea?
No.

3. What evidence exists for the falseness of the idea?
Being alone is not as pleasurable as having a date, but I can find pleasure in an alternate activity.
I usually enjoy being alone, and I will tonight as soon as I face the disappointment.

I'm mislabelling frustration and disappointment as "falling apart."

4. Does any evidence exist for the truth of the idea?
   No, only that I've talked myself into feeling depressed.

5. What is the worse thing that could happen to me?
   I could continue to feel disappointed and not find anything really pleasurable to do tonight.

6. What good things might occur?
   I might feel more self reliant, and realize that I do have inner resources.

E. Alternative thoughts:
   I'm OK. I'll get out my detective novel. I'll treat myself to a good Chinese dinner. I'm good at being alone.

   Alternative emotions:
   I feel quiet, a little disappointed, but I'm anticipating a good meal and a good book.

Use this format with all the stressful events you experience. Spend at least 20 minutes a day on the homework. When possible, do the homework right after the event has occurred. Use a separate sheet for each event, and save them as a record of your growth.
A. Activating Event:

B. Rational Ideas:

Irrational Ideas:

C. Consequences of the irrational ideas:

D. Disputing and challenging the irrational ideas:
   1. Select the irrational idea:
   2. Is there any rational support for this idea?
   3. What evidence exists for the falseness of the idea?
   4. Does any evidence exist for the truth of the idea?
   5. What is the worst thing that could happen to me?
   6. What good things might occur?

E. Alternative thoughts:

Alternative emotions:
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