The effects of stress on African American graduate student attrition rate: a comparative study of age, gender, and social economic status

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ABSTRACT
SOCIOLOGY

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THE EFFECTS OF STRESS ON AFRICAN AMERICAN GRADUATE STUDENT ATTRITION RATE: A COMPARATIVE STUDY OF AGE, GENDER, AND SOCIAL ECONOMIC STATUS

Advisor: Sandra E. Taylor, Ph.D.

Thesis dated December, 1995

Fifty African American graduate students, attending a historically black university in the Southeast, participated in a survey designed to identify common stressors in their lives. The study is based on the Koeske and Koeske (1991) model that is predicated on the notion that individuals perceive certain situations as stressful and can suffer adverse effects due to their stress response.

The study's primary finding shows that African American students report a high level of stress when dealing with certain life events. Included among these events are divorce, death of loved ones, and career decisions. Despite a high level of stress encountered in dealing with specific events, the study found that the African American graduate students surveyed were able to effectively cope with most of the stressful situations in their lives. Although generalizability is precluded due to the size and composition of the sample, the study suggests that stress is prevalent among graduate students on historically black university campuses.

An important implication of the study is the need for programs that counteract stressors leading to attrition. Additionally, the study points to the need for programs that teach stress management and coping skills for African American graduate students attending historically black universities.
THE EFFECTS OF STRESS ON
AFRICAN AMERICAN GRADUATE STUDENT ATTRITION RATE:
A COMPARATIVE STUDY OF AGE, GENDER, AND SOCIAL ECONOMIC STATUS

A THESIS
SUBMITTED TO THE FACULTY OF CLARK ATLANTA UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF ARTS

BY
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DEPARTMENT OF SOCIOLOGY

ATLANTA, GEORGIA
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CHAPTER 1
PURPOSE AND RATIONALE
African American Students in Higher Education

During the Reconstruction period of American history, attempts were made to provide education to individuals who were formerly enslaved and set free at the end of the Civil War. An organization called the Freedmen’s Bureau was the vanguard in establishing institutions to educate blacks by raising thousands of dollars for social welfare.¹ They were the first major financial supporters of black schools and organized other blacks to contribute their nickels and dimes in support. The freedmen went on to own hundreds of schools and support hundreds more. Between 1865 and 1870, this group contributed $785,700 in cash to black schools.² In 1865, at the end of slavery, about one in every twenty blacks could read and write; in 1900, the number increased to one out of every two.³

Over a century later, thousands of blacks were students at colleges and universities across America. The numbers were nowhere near as high as enrollment of white students, but it definitely was a far cry from the desolate condition wherein slavery


²Ibid, 222.

³Ibid, 295.
had left their foreparents. Ironically enough, the further along African Americans went in their education, the farther back they were held in society. College degrees did little to eradicate discrimination in the workplace or in the university. African American students have long been regarded as affirmative action beneficiaries who were allowed into schools to fulfill federal preset quotas. As the numbers remain low in undergraduate school, they are lower still in graduate and doctoral programs.

In the early 1980s, African American students were significantly underrepresented in graduate and professional schools relative to their availability in the undergraduate pool. A decade later, these students remain underrepresented in these programs. Predominantly African American colleges and universities have contributed heavily in conferring degrees on African American students and made important contributions toward reducing graduate attrition rates. Many of these institutions rely on limited funding and tuition fees, but their ability to remain operational and produce more than their proportionate share of African American post-graduates highlights the strength and viability of these institutions.

Black enrollment in postsecondary education is one of the areas in which the greatest advances have been made in recent decades. In 1964 there were 234,000 blacks enrolled in colleges and universities; 20 years later that number had increased to one million. But this increase only tells a portion of the story. Blacks in postsecondary education tend, to a disproportionate extent, to be enrolled in two-year community colleges.


5Ibid, 272.

Such students are awarded associates degrees, which are supposed to allow them to transfer to a four-year college to complete coursework for a baccalaureate degree. In some cases, however, these degrees are not creditable towards the baccalaureate. The reality becomes that community college is the end of some black students' higher learning and the beginning of marginal occupational careers; and the attrition rates are often disproportionately high.7

Of course, not all African American students follow this path of postsecondary education, but graduate from an undergraduate college or university. After this point the number of students that continue on into graduate and doctoral programs declines sharply. In 1982, of the total number of student enrollments in U.S. graduate and professional schools, African Americans made up less than ten percent of the collective graduate student population. The most underrepresented fields were in the natural and technical sciences.8

Nonetheless, with the advent of government policies that encourage an increase in minority enrollment, there should also be an increase of minority graduates. The increased African American enrollment has given impetus to the consideration of factors in the college atmosphere that may have a determining impact on the success or failure of black students.9

There is an unequivocal need for African American graduate students in the United States. A countless number of social studies have illustrated the deprivation in the African American community, which needs strong, educated minds to develop programs that will turn around this economically and socially imbalanced area in society; thus, it is imperative

7Ibid, 137.

8Thomas, 267.

that black students continue with their education.

Adverse Effects of Stress

In their research on African American students on predominantly white campuses, Smith and Baruch (1981) found:

There are problems which seriously impact on black higher education, whether that education takes place at predominantly white institutions, at historically black colleges, or at newer predominantly black colleges ... Black students attending white universities are caught in a whirlwind of confusing racial identities. They see their universities as hostile places where white students and faculty perceive that all blacks are "special admits" and beneficiaries of affirmative action ... Additional problems African Americans face in coping with their minority status at predominantly white institutions involve inadequate financial assistance, lack of supportive services, and underrepresentation in graduate and professional programs. These are prime stressors that inhibit their advancement in higher education.10

Hans Selye, regarded as the first to conceive the notion of stress, most thoroughly explored its effects in his work. Selye (1956) developed a theory known as General Adaptation Syndrome, in which he identified three stages in the stress response: alarm, resistance, and exhaustion. In the alarm stage, the body recognizes the stress and prepares for action, either to fight or escape. Endocrine glands release hormones that increase heartbeat and respiration, elevate blood sugar, increase perspiration, dilate the pupils, and slow the digestion. In the resistance stage, the body repairs any damage caused by the alarm reaction. If the stress continues, however, the body remains alert and cannot repair the damage. As resistance continues, the exhaustion stage sets in, and may result in

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a stress-related disorder. Prolonged exposure to stress depletes the body’s energy supply and can even lead to death.

It is clear that people who have too many stressors in their lives or who handle stressors poorly are at risk for a wide range of health problems. In the short term, the problem might just be a cold, a stiff neck, or a stomach ache. In the long term, the problems can be more severe -- cardiovascular disease, high blood pressure, or impairment of the immune system. As researchers learn more about the connections between mind and body, the list of illnesses linked to stress grows.

Stress is a condition that can have profound detrimental effects on the human body and psyche. The most serious long-term effect of stress on the body is high blood pressure. In the alarm phase of stress response, heart rate increases and blood vessels constrict, causing blood pressure to rise. Chronic high blood pressure is a major cause of atherosclerosis, a disease in which the lining of the blood vessels becomes damaged and caked with fatty deposits, which can block arteries and cause heart attacks.

Empirical Research on African American Students and Stress:

The college experience can be a stress-filled period of growth where students face critical decisions about their life work, confront new role relationships, and break home ties. To insure high success and adjustment rates, students must properly handle high levels of stress that not only accompany normal university scenarios, but are also prevalent


13Ibid, 34.
In previous literature, stress has been defined as “psychological distress” and measured through “stress response” observations (Koeske and Koeske, 1991; Gunnings, 1982; Anderson and Cole, 1986; D’Zurilla and Sheedy, 1991; Cockerham, 1990; Allen, 1985; Pliner and Brown, 1985). Most of these studies were conducted on college and university campuses where African Americans are the minority population. The common results of the research are that African American students have ambivalent attitudes toward faculty members and other students and suffer distress as a result of attempting to adjust to their college environment. These feelings are attributed to the stress brought on as a result of the minority status of African Americans on campuses.

The problems that African Americans face in coping with minority status -- the social disorganization produced by racism and poverty, the struggle for survival in the inner city, and the increasing demands for survival in the modern environment -- are all candidates for stressors. These stressors not only affect the general African American population, but are of particular consequence to college students. However, they do not have the same magnitude for white students.

Studies show that there are differences in both perceptions of stressors and types of problems experienced among black and white students (Pitcher and Hanson, 1978; Westbrook, Miyares, and Roberts, 1978). Black students have greater concerns regarding ethnic unity and trust, academic difficulties, and finances than their white counterparts. They also perceive the social climate more negatively than do white students.


Of the above mentioned concerns, finances stand out as a major stressor. Although a common problem for all students, financial difficulties were found to be a specifically high source of stress for blacks. A majority of African American families do not have the resources provided to upper class white families that ease the financial burden of education. Many African American families rely on the federal and state government financial aid services provided for students to assist in putting their children through college.

In order for there to be an increased number of African American students in graduate programs, students must remain in undergraduate school. MacKay and Kuh, 1994, found that “more than two-thirds of all African American students leave [undergraduate school] before graduating, compared with about 45 percent of Caucasian students.” African American students have needs that are not being addressed at the undergraduate level; especially at predominantly white institutions. Here, social adjustment is drastic and faculty support is limited. Many larger universities have enormous instructor-to-student ratios that do not give allowance for professors to further assist or build relationships with their enormous student rosters. Adjusting to this type of environment is difficult for many African Americans whose socialization includes extended-family networks and close parental ties. In this type of college setting, large peer networks are important.


In its common usage, "stress" refers to two things: situations that can trigger physical and emotional reactions, and the reactions themselves. The situations that trigger physical and emotional reactions are referred to as "stressors," and the term "stress response" refers to those reactions. Koeske and Koeske (1991) give a conceptual definition of stress and how it can be measured:

Stress has been conceptualized as a condition of perceived tension between demands and resources and depends on ongoing appraisals of both elements as they present themselves in concrete events. It may be measured as the frequency of specific troubling events or "hassles" associated with being a student (event stress), as a generalized subjective report of felt stress specific to the student role (felt stress), or as the perception of conflict between fulfilling the student role and fulfilling other simultaneously held roles (conflict stress).18

David Mechanic's (1962) Stress Adaptation model, which states that "the outcome or effect of a crisis depends on how well a person comes to terms with the situation,"19 provides an analysis of stress-response and the way individuals react to stressors. Mechanic furthers his theory by asserting that "important coping skills are an integral part in counteracting the adverse effects of stressors. In social situations people have different skills and abilities in coping with the situation. Stress, therefore, refers to difficulties experienced by the individual as a result of perceived challenges."20

The college experience is nothing short of a constant challenge. For graduate students, there is an increased challenge of constantly maintaining a minimum 'B' grade


20Ibid, 132.
point average. Couple this with the possibility of family and career obligations while attending classes and there arises great opportunity for stressors. Successful stress-response, which constitutes being able to effectively handle stressful situations, is predicated on how an individual reacts to perceived stressors. The question then arises: How can African American students who suffer from stressors learn effective stress-response skills?

One answer is in examining the causes of student stress and assessing the "breaking point," where students become strained and seek to escape academic situations by dropping out. Koeske and Koeske (1991) present a "stress leads to strain (burnout) which leads to outcome" model that tests the mediating influence of student strain (burnout) in the impact of student-specific stress on negative consequences. Their findings show that support provided within the school environment proved to be the most effective in preventing the intention to quit school, and that "burnout" has a mediating influence on positive stress response. Strain is conceptualized as a negative affective response by the individual to ongoing context-specific stress. It includes a sense of being overburdened, exhausted, drained, inadequate, or pressed beyond what is comfortable or possible.

The models from Mechanic and Koeske and Koeske both regard stress as a reactionary condition relative to individuals' perceptions of situations. In other words, those who suffer adverse affects from stress are those who perceive certain situations as

21Koeske and Koeske, 415.

22Ibid, 426.


24Koeske and Koeske, 416.
“stressful.” However, the Mechanic nor the Koeskes’ models offer indicators that
determine if an individual is suffering from stress, but the Koeske and Koeske model does
illustrate a method of counteracting stressors by seeking to identify the point at which
individuals’ feel strain and want to escape situations.

The present study seeks to further identify the point of strain that is common to
African American graduate students. By conducting research on a predominantly African
American university campus, certain minority-status and psychological stressors (such as
racism and inhibitions toward peers and faculty members) should not be present. This
research environment would provide a setting for sample members to provide clear
indication of situations they define as stressors. Results of the study can help determine if
predominantly African American universities provide better conditions for African
Americans to pursue graduate and post-graduate degrees.

Black colleges and universities are best characterized as nurturing institutions.25
Monro (1978) notes that they have competent and dedicated faculties, “who are interested
in teaching students, rather than just teaching a subject.”26 With the difficulties reported in
the literature concerning adjustment for African Americans at predominantly white
institutions, predominantly African American universities could be a viable alternative.

To determine this, the present study used a variation of the Koeskes’ model
describing the three types of stresses (event, felt, and conflict). However, instead of
measuring stressors unique only to school situations, the sample was queried about general
stress, handling of personal problems, and reaction to sudden, emotional events. This
method allowed for a broader field to study and to determine “burnout.”

25Charles V. Willie, “Black Colleges are Not Just For Blacks Anymore,” Journal

26John U. Monro, “Teaching and Learning English,” in Black Colleges in America,
Independent variables for this study include age, gender, and social economic status (SES). It is hypothesized that older graduate students will suffer less adverse effects of stress than younger graduate students. It can be assumed that older individuals have greater life experiences than younger persons. Because of the greater experience, more effective coping skills can be developed that counteract the stressful scenarios that accompany the graduate experiences.

In regards to gender, the hypothesis is that male graduate students will suffer less adverse effects of stress than female graduate students. Male socialization in society is less emotion-oriented than female socialization and, as a result, would allow males to deal with stressful situations more effectively.

The hypothesis regarding SES is that students from upper economic backgrounds will suffer less adverse effects of stress than students from lower economic backgrounds. Those from upper economic backgrounds can be exposed to greater economic resources and have access to more effective network support. The greatest burden of education is the financial responsibility that accompanies it. It has been determined that among persons with low incomes, blacks show significantly more psychological distress than whites, and social class is more important than race in determining psychological distress. Given these findings, the foregoing hypotheses were derived.

Population of Sample and Survey Design

The sample for this study totaled 50 students who were enrolled in graduate programs at a Southeastern university and resided in campus housing. The students, all

African Americans, were given a questionnaire during the Spring 1995 semester. This study differs from much of the previous literature in that its focus is on African American students attending a historically Black university. Previous studies have utilized students in majority white settings.

The questionnaire is based on the *Perceived Stress Scale*, a survey consisting of 14 items inquiring about frequency of stressors. Each frequency is assigned a value from 0 (never) to 4 (very often) for each item (see Appendix A). The percentage of students scoring in each category was computed for each item. Based upon the scores from the survey, the respondents were categorized under their corresponding level of stress. Students were also informed of their scores so that they could seek counseling as necessary.

The independent variables were operationalized as follows: AGE was operationalized by the respondent’s age at the time of completing the survey; GENDER consisted of the categories male and female; and SOCIAL ECONOMIC STATUS (SES) was defined in terms of the respondent’s employment status. The variable “age” was identified by two categories, “traditional” and “non-traditional” graduate students.
Ample research has been conducted that examines stressors which affect the academic progress of African Americans (e.g., Gunnings, 1982; Nottingham et al, 1992; Armstead et al, 1989; Sedlacek, 1987; Shingles, 1979); but many of these studies examine students in the context of minorities attending predominantly white institutions and concentrate on racially-induced stressors. According to the research, minority students occupy a more stressful position in the campus social structure and perceive their environment quite differently than their Caucasian counterparts.¹ Black students have shown greater feelings of social isolation than have whites and viewed their social climate as more negative than have white students.² They are highly visible and are the object of negative attention that results in their choosing separatism as a means of dealing with their environment.³ Hence, there is a pattern of racial exclusivity generally seen on integrated campuses.

The academic success and retention of minorities are influenced more by the person-environment transactions and related sociocultural influences within the institution


³Ibid, 14.
than by intellectual and academic factors. Academic performance and well-being often suffer as the result of the difficult psychological and social adjustments required by these high-pressure and often non-supportive environments. Black students see white faculty members as less interested in them and paying less attention to their needs than to white students.4

According to Smedley, Myers, and Harrell (1993), white peers, students’ doubts about their own abilities, and concerns that faculty and peers may question their legitimacy as college students, threaten the effective early adjustment to college of black students. The advent of Affirmative Action-based minority admission programs have produced a stereotype that the majority of African American students have been admitted as a result of these programs. As a result, these students are perceived as having not worked as hard to get into college as their white peers. Even before reaching the college level, minority status stresses may also be operative in the educational system and have an impact on student adjustment. Minority students from elementary through high school may experience similar disincentives, including teacher and peer expectations for their failure, intergroup conflicts, racist policies and practices of school districts, and culturally insensitive curricula. Academic performance may be affected by these minority status stresses very early in a students’ schooling, which can cause attrition at the college level.5 The study concluded that the more debilitating minority status stressors were those that undermined students’ academic confidence and ability to bond to the university. These minority status stresses may be greater for African American college freshmen than for other minority...


freshman. The freshman level is key for academic success because it is the introduction to the college lifestyle.

Pentages and Creedon (1978) found that during the 1950s, 1960s, and 1970s, academic factors accounted for the higher attrition rate among black students. Findings show that African American students’ attrition rates to be five-to-eight times higher than those for white students on the same campuses. More recently, other researchers (Fleming, 1984; Tinto, 1975) have concluded that sociopsychological factors (e.g., racism, alienation, lack of emotional support) have significantly contributed to the high attrition rate of black students. As a result of these factors, black students may find it more difficult to take advantage of what the college milieu has to offer in stimulating student learning and development. Astin (1975) had found that students who were highly involved in the campus experience (e.g., those who were enrolled full-time, participated in campus clubs or organizations, lived on campus, studied hard, and frequently interacted with faculty and other students) showed higher perseverance rates in college. Conversely, students who were not involved showed higher dropout rates in college. Student involvement is defined as the amount of psychological and physical energy that college students devote to collegiate activities such as studying, interacting with faculty and other students, participating in campus clubs and organizations, and spending

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time on campus. If minority status-stresses have alienated black students from their peers and instructors, then campus involvement in social and academic activities will be hampered. Black student efforts to counteract their loneliness and alienation, by grouping together at dining tables, rooming together, and by joining all-black social groups are discouraged by university officials — the very activities which might protect them and enhance their potential to remain in college.

Research findings suggest that African American students have not fared well on predominantly white college campuses. Relative to white students, they have lower persistence rates, lower academic achievement levels, less likelihood of enrollment in advanced degree programs, poorer overall psychosocial adjustment, and lower post-graduation occupational attainments and earnings. However, more than non-blacks, blacks stressed the significance of setting high academic goals and obtaining high grades. Blacks were found to be keenly aware of the competitive job market as well as the competition involved in gaining entrance into graduate school.

Studies have employed the approach of measuring the psychological and physiological consequences of racial stressors placed on students (Nottingham, Rosen, and Parks, 1992; Gunnings, 1982; and Neighbors, 1990). They conclude that African Americans face social adjustment problems, because of the proportionately small number of


11Allen, 134-135.

12Keller, Piotrowski, and Sherry, 130.
minority students generally found on these campuses, that are manifested through their patterns of social interaction among peer groups. The students are expected to sustain a high level of achievement in a competitive, foreign society and function above their frustration level with a high degree of mental and physical alertness.

The effects of racism as a stressor were examined in relation to blood pressure and anger experiences in research by Armstead et al, 1989. Exposure to racist stimuli was found to be associated with increased blood pressure and hypertension among African Americans. After administering the Framingham Anger Scale and the Anger Expression Scale, it was found that blood pressure would increase more significantly when the subject was exposed to racist stimuli than to anger-provoking stimuli. It was also found that African Americans are seen as having to endure greater amounts of psychological stress than whites in an university setting.

Problem-solving was found to be an important coping strategy to counteract psychological stress. The literature found that problem-solving could reduce, minimize, or prevent psychological stress by enabling a person to better manage daily problematic situations and their emotional effects.13

Cross (1971) proposed a racial identity model that asserts blacks’ progress through four distinct psychological stages as they evolve from a self-perception in which “blackness” is degraded to a self-perception in which they are secure with “blackness.” The four stages, ranging from least self-secure to most self-secure are: preencounter, encounter, immersion-emersion, and internalization.

In the preencounter stage, a person’s world view is dominated by a Euro-American frame of reference, as he or she thinks, acts, and behaves in ways that devalue Blackness. During the encounter stage, a startling personal or

social event challenges the old frame of reference and causes the person to be receptive to a new interpretation of her or his identity. In the immersion-emersion stage, the person begins to develop a sense of “Black Pride”; his or her level of Black involvement is high, but the degree of internalization of positive attitudes about one’s own Blackness is minimal. This stage is characterized by a tendency to denigrate White people while simultaneously glorifying Black people. In the final stage, internalization, the person achieves a feeling of inner security with his or her Blackness and tends to feel more satisfied with it. This stage is characterized by ideological flexibility and a decline in global anti-White feelings.14

This model assists in explaining the dynamic African-American students face upon entry into predominantly white universities. The university setting and subsequent minority-status stresses act as a catalyst for the encounter stage, bringing a whole new identity element to the students. The formation of Black Student Unions and Black Studies departments in Liberal Arts schools are examples of the development of self-awareness and a leap away from integrating with the white student body. However, these situations have caused a backlash from whites who see the formation of separate organizations and departments as “reverse discrimination,” which leads to increased racial tensions between blacks and whites.

Status-related pressures are associated with increased feelings of distress and pose additional demands on students’ coping resources. These stresses emerge from various sources, including contact and conflict from within and between racial and ethnic groups. Such external pressures are often compounded by pressures for loyalty and solidarity from within the respective ethnic groups, which become more salient as campus race relations are experienced to be more conflictual.15 This type of scenario illustrates


Cross' encounter stage and how African American students can be wedged between racial allegiance and social interaction with the balance of the student population. Balance is not achieved until the student reaches the internalization stage and is able to discern between having a responsibility to his/her racial group and general association with other groups.

Studies also demonstrated the way African Americans feel about themselves in relationship to their success and adjustment at school. Much of these attitudes were affected by self-esteem levels which can influence a student's decision to remain in school during difficult periods. Self-esteem was defined as an individual's self-acceptance or their general positive or negative attitude toward themselves. Thus, high self-esteem implies that individuals see themselves as people of worth, although they do not necessarily believe they are superior to others; low self-esteem implies self-rejection, self-dissatisfaction, or self-contempt.\(^\text{16}\) Academic and job performance were both shown to be significantly affected by the stressors of experienced life changes in the reviewed research. The major academic stressors were found to be the performance on scheduled tests (including final exams), competition with peers, and financial aid.\(^\text{17}\) Although financial problems may be common to all students, they tend to be a high source of stress for African Americans.\(^\text{18}\)

In addition to school pressures, these students typically handle cultural biases and


other students to become a central part of the informal communication system that is critical in making self-assessments. Faculty contact outside the classroom was found to be a significant predictor of grade point average for students.\textsuperscript{19}

Alternative definitions to stress were found in the literature as well. "Strain" and "burnout" were measured against academic performance and it was discovered that academic and job performance were both shown to be significantly affected by the stressors of experienced life changes.\textsuperscript{20} Life changes were also linked to the increased rate of illness and disease in college students. The study sampled undergraduates, but could yield different results if measured with graduate students, who may have developed better coping skills to deal with stressors.

Life events have produced situations that are not conducive to learning that are of a different nature. Marriage, children, and the added responsibilities of home and family life, can certainly give precedence over attending school. The accumulation of several events in a person's life eventually builds up to a stressful impact.\textsuperscript{21} A relationship exists between life stress and physical illness, up to and including cardiac arrest.\textsuperscript{22} This poses a serious threat to not only older individuals, but younger generations.

A pattern of including young undergraduate students as the population sample was found in the reviewed examinations. In two of the studies (Cohen et al, 1983, and


\textsuperscript{20}Anderson and Cole, 500.


Nottingham et al, 1992), the mean age of the samples was 19 and 20 respectively. Examining a sample with a mean age three to five years older gives the opportunity to study coping skills. This could provide insight into methods that are most effective in combating stressors.

Preventive standards could be established that aid academic counselors with students who fit similar personality profiles -- especially female students who characteristically suffer from stress-related illnesses more often than males.23 Among African American university students, there is a larger female population than male (Jackson and Sears, 1992; and Nottingham, Rosen, and Parks, 1992). This heightens the concern for keeping the male population in school and increasing the enrollment of undergraduate and graduate African American males.

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CHAPTER 3

METHODOLOGY

Description of the Survey

Data for this study were collected through following a model of "A Study of Life in Graduate School," a questionnaire modified from the "Perceived Stress Scale" (Cohen, Kamarck, and Mermelstein, 1983). The items in the Stress Scale were designed to identify the degree to which respondents found their lives unpredictable, uncontrollable, and overloading.

The [Perceived Stress Scale] was designed for use with community samples with at least a junior high education. The items are easy to understand and the response alternatives are simple to grasp ... The questions are quite general in nature and, hence, relatively free of content specific to any subpopulation group.¹

The Stress Scale was chosen to serve as the section that inquires about stressful instances in the present measurement because of its simple approach. It is more closely related to a life-event impact score, which is to some degree based on the respondent's assessment of the event, than to the more objective measure of the number of events occurring within a particular time span.² It also asks about situations occurring within a shorter period of time, which is sufficient for this study because perceived stress during the


²Ibid, 386.
last month should reflect any objective events that are still affecting respondents’ stress levels.³

The Study of Life is a 30-item measurement comprised of two parts: 14 questions from the Stress Scale that measure stressors and 16 additional personal information questions that represent the independent variables. All but two of the items are in a matrix-question format, and there are three contingency questions.

Graduate Student Sample

A convenience sample of 50 African American graduate students (22 female and 28 male) enrolled in a comprehensive historically Black university participated in the study. The mean age of the sample was 28. The survey was administered to those who resided on the second, third, and fourth floors of one of the coed dormitories located on the main campus. Approximately 120 graduate students constitute the overall residency of the dormitory. The students were asked to complete and return the questionnaire within 24 hours after receiving it to the dormitory director. Fifty questionnaires were returned, and there were no missing data throughout each survey.

Hypotheses

The theoretical framework suggests the following hypotheses:

1. Traditional graduate students suffer less adverse effects from stress than non-traditional graduate students.

2. Male graduate students cope with stress more effectively than female graduate students.

³Ibid, 390.
3. Students from higher economic backgrounds are less likely to suffer from stress than are students from lower economic backgrounds.

Traditional graduate students are considered to be those who have entered graduate school immediately following or shortly after finishing undergraduate work. Those considered non-traditional have taken time off between undergraduate and graduate school. Older individuals, in general, have greater responsibilities to fulfill. In contrast, younger persons, in general, do not have as many obligations. Because of the greater responsibility, there is a greater opportunity for stress in attempting to balance the many commitments. Because of the greater responsibility of career and family that a non-traditional student faces while in graduate school, it is hypothesized that they will incur greater amounts of stress than traditional students.

Males are socialized to deal with pressures with less emotional reaction than females. Given the many pressures of deadlines and maintenance of a high grade point average, it is hypothesized that males will respond to situations with lower levels of stress than females.

Individuals who live in higher economic backgrounds have the opportunity to benefit from resources in education that are not afforded to those who are in lower economic conditions. The costs of education can be very stressful in general; but for those who do not have the economic resources at hand, it can be an even greater financial burden. This leads to the hypothesis that students who hail from higher economic backgrounds feel less detrimental affects of stress than those from lower economic backgrounds.
Data and Methods

Data for this research were collected through "A Study of Life in Graduate School," a questionnaire modified from the "Perceived Stress Scale" (Cohen, Kamarck, and Mermelstein, 1983).

The dependent variable, stress, was operationalized by three categories:

1. General Center
2. Handle Problems
3. Emotional Center

"General Center" was operationalized by the following questions:

1. In the last month, how often have you felt that things were going your way?
2. In the last month, how often have you been able to control irritations in your life?
3. In the last month, how often have you felt that you were on top of things?
4. In the last month, how often have you been angered because of things that happened outside of your control?
5. In the last month, how often have you been able to control the way you spend your time?

The response categories were:

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never
"Handle Problems" was operationalized by the following questions:

1. In the last month, how often have you dealt successfully with irritating life hassles?
2. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
3. In the last month, how often have you felt confident about your ability to handle your personal problems?
4. In the last month, how often have you found yourself thinking about things that you have to accomplish?

The response categories were:

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

"Emotional Center" was operationalized by the following questions:

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous or "stressed"?
4. In the last month, how often have you found that you could not cope with all the things that you had to do?

The response categories were:

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

The independent variables are:

1. Age
2. Gender
3. Marital status
4. Amount of religious activity
5. Program of study
6. Payment for education
7. Interruption of study
8. Level of education of mother
9. Level of education of father
10. Receipt of financial assistance from family
11. Employment status
12. Amount of personal income

Age is operationalized by asking the following question:

"How old are you?"

The response categories were:

1. 23 - 27
2. 28 - 32
3. 33 - 37
4. 38 - 42
Gender is operationalized by asking the following question: “What is your gender?”

The response categories were:
1. Male
2. Female

Marital status was operationalized by the following question: “What is your current marital status?”

The response categories were:
1. Single/Not living with partner
2. Single/Living with partner
3. Married
4. Widowed
5. Divorced/Separated

Amount of religious activity is operationalized by asking the following question: “How religious do you consider yourself to be?”

The response categories were:
1. Very religious
2. Moderately religious
3. Not at all religious
Program of study is operationalized by asking the following question:

“What program of study/school are you enrolled in?”

The response categories were:

1. Public and International Affairs
   a. Masters
   b. Doctorate

2. Business Administration
   a. Masters
   b. Doctorate

3. Library and Information
   a. Masters
   b. Doctorate

4. Education
   a. Masters
   b. Doctorate

5. Social Work
   a. Masters
   b. Doctorate

6. Arts and Sciences
   a. Masters
   b. Doctorate

Payment for education is operationalized by asking the following question:

“How are you paying for your education?”
The response categories were:

1. Student loan
2. Grants
3. Scholarship
4. Personal Income
5. Family Support
6. Other

Interruption of study is operationalized by asking the following question:

"Has your graduate school training been interrupted recently?"

The response categories were:

1. Yes
2. No

This is a contingency item that requires additional operationalization if the respondent responds "yes" to the above item. The contingency question is as follows:

"If yes, within what period?"

The response categories were:

1. 1 semester
2. 2 semesters
3. 3 semesters
4. 4 semesters
Level of education of mother is operationalized by asking the following question:

"What is the highest degree attained by your mother?"

The response categories were:

1. Less than high school
2. High school
3. Junior college
4. Bachelor degree
5. Graduate degree
6. Post-graduate degree

Level of education of father is operationalized by asking the following question:

"What is the highest degree attained by your father?"

The response categories were:

1. Less than high school
2. High school
3. Junior college
4. Bachelor degree
5. Graduate degree
6. Post-graduate degree

Receipt of financial assistance from family is operationalized by asking the following question:

"Do you receive financial assistance from family members?"
The response categories were:
1. Yes
2. No

This item also includes an additional item if the respondent responds "yes."
The contingency item is operationalized by asking the following question:
"If yes, how often?"

The response categories were:
1. About once a month
2. About twice a year
3. About four times a year
4. About once a year

Employment status is operationalized by asking the following question:
"Are you employed?"
The response categories were:
1. Yes
2. No

This item also includes an additional item if the respondent responds "yes."
The contingency item is operationalized by asking the following question:
"If yes, full or part-time?"

The response categories were:
1. Full-time
2. Part-time
Amount of personal income is operationalized by asking the following question:

“What was your total personal income from all sources last year?”

The response categories were:

1. $ 0.00 - $ 9,999
2. $10,000 - $14,999
3. $15,000 - $19,999
4. $20,000 - $24,999
5. $25,000 - $29,999
6. $30,000 - $34,999
7. $35,000 - $39,999
8. $40,000 - $44,999
9. $45,000 - $50,000

The Study of Life is a 30-question survey comprised of two parts: 14 questions focusing on areas of stress and 16 questions that inquired about personal information. It was designed to track stress levels among respondents by asking how often stressful situations occur in their lives within the last month.

The dependent variables were formulated from the first 14 questions that came from the Stress Scale. In order to test for stress, each question was coded and a factor analysis was applied to condense the variables in an attempt to form three distinct constructs (see Table 3-1). The analysis would also reveal which variables were most closely associated with each factor and would weigh more heavily in the overall factor score.
After the factor analysis, a factor matrix was created in order to divide the items into three groups in which questions contained similar stressful scenarios (see Table 3-2). Three groups of variables eased the process of applying stress to the respondents’ answers.
### TABLE 3-2
Factor Matrix of Stress Scale Questions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unexpected event</td>
<td>0.77</td>
<td>0.29</td>
<td>0.28</td>
</tr>
<tr>
<td>Uncontrolled event</td>
<td>-0.65</td>
<td>-0.39</td>
<td>-0.36</td>
</tr>
<tr>
<td>Nervous</td>
<td>0.74</td>
<td>0.39</td>
<td>0.16</td>
</tr>
<tr>
<td>Life hassles</td>
<td>0.51</td>
<td>0.54</td>
<td>-0.30</td>
</tr>
<tr>
<td>Coping effectively</td>
<td>-0.68</td>
<td>-0.25</td>
<td>0.23</td>
</tr>
<tr>
<td>Personal problems</td>
<td>-0.58</td>
<td>-0.21</td>
<td>0.47</td>
</tr>
<tr>
<td>Going your way</td>
<td>-0.71</td>
<td>0.46</td>
<td>0.26</td>
</tr>
<tr>
<td>Cope with things</td>
<td>0.76</td>
<td>-0.04</td>
<td>0.35</td>
</tr>
<tr>
<td>Life irritants</td>
<td>-0.59</td>
<td>0.41</td>
<td>0.33</td>
</tr>
<tr>
<td>On top of things</td>
<td>-0.65</td>
<td>0.28</td>
<td>-0.20</td>
</tr>
<tr>
<td>Out of control</td>
<td>0.62</td>
<td>-0.31</td>
<td>0.07</td>
</tr>
<tr>
<td>Accomplish things</td>
<td>0.48</td>
<td>0.37</td>
<td>-0.17</td>
</tr>
<tr>
<td>Control of time</td>
<td>-0.54</td>
<td>0.41</td>
<td>0.27</td>
</tr>
<tr>
<td>Things piling up</td>
<td>0.54</td>
<td>-0.58</td>
<td>0.32</td>
</tr>
</tbody>
</table>

In order to finally achieve the three grouped variables, the factor matrix had to be rotated, where the data were re-ordered, in order to cluster the numeric data to find congruency with the variable sets. The final variable construction, the item “things piling up” was deleted.
TABLE 3-3
Varimax Factor Rotation of Stress Scale Questions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unexpected event</td>
<td>-0.18</td>
<td>0.75</td>
<td>-0.39</td>
</tr>
<tr>
<td>Uncontrolled event</td>
<td>0.01</td>
<td>-0.77</td>
<td>-0.35</td>
</tr>
<tr>
<td>Nervous</td>
<td>-0.12</td>
<td>0.67</td>
<td>-0.52</td>
</tr>
<tr>
<td>Life hassles</td>
<td>0.02</td>
<td>0.22</td>
<td>-0.77</td>
</tr>
<tr>
<td>Coping effectively</td>
<td>0.29</td>
<td>-0.30</td>
<td>0.63</td>
</tr>
<tr>
<td>Personal problems</td>
<td>0.32</td>
<td>-0.05</td>
<td>0.71</td>
</tr>
<tr>
<td>Going your way</td>
<td>0.84</td>
<td>-0.13</td>
<td>0.23</td>
</tr>
<tr>
<td>Cope with things</td>
<td>-0.40</td>
<td>0.72</td>
<td>-0.14</td>
</tr>
<tr>
<td>Life irritants</td>
<td>0.75</td>
<td>-0.01</td>
<td>0.25</td>
</tr>
<tr>
<td>On top of things</td>
<td>0.55</td>
<td>-0.48</td>
<td>0.03</td>
</tr>
<tr>
<td>Out of control</td>
<td>-0.59</td>
<td>0.36</td>
<td>-0.08</td>
</tr>
<tr>
<td>Accomplish things</td>
<td>-0.06</td>
<td>0.25</td>
<td>-0.57</td>
</tr>
<tr>
<td>Control of time</td>
<td>0.71</td>
<td>-0.03</td>
<td>0.19</td>
</tr>
<tr>
<td>Things piling up</td>
<td>-0.68</td>
<td>0.43</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Index Construction

After the varimax rotation, a factor correlation matrix was produced for each variable. This showed the correlation of the factors with one another. The low correlation statistic indicates the factors are distinct. Each factor was then labeled.

Factor 1 is associated with everyday stress. For example, respondents were asked how often they felt things were going “their way” during everyday life, or how often they were able to control the important things that were going on in their lives. These types of general questions sought out information about how the respondent was able to deal with normal agitations of daily life such as keeping things under control, staying on top of
responsibilities, and becoming angered about things that were out of their control. This group was coded “General Center” (GNRLCNTR).

TABLE 3-4
Correlation Matrix for “GENERAL CENTER” with Alpha Score (N=50)

<table>
<thead>
<tr>
<th></th>
<th>Going your way</th>
<th>Life irritants</th>
<th>On top of things</th>
<th>Out of control</th>
<th>Control of time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable1</td>
<td>Going your way</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Life irritants</td>
<td>0.62</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>On top of things</td>
<td>0.39</td>
<td>0.40</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Out of control</td>
<td>-0.58</td>
<td>-0.44</td>
<td>-0.33</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Control of time</td>
<td>0.63</td>
<td>0.39</td>
<td>0.34</td>
<td>-0.39</td>
</tr>
</tbody>
</table>

Note: For all alpha score values, A = -0.1153

Questions that sought out information about unexpected events and feeling nervous were coded as the “Emotional Center” (EMOTCNTR). The level of stress incurred by respondents in this variable group were directly proportionate to the effectiveness of coping skills used in counteracting stress-related occurrences. Sudden occurrences such as a significant death or an emergency situation can trigger stress in the body and can be the most detrimental types of stressful effects.
Finally, the code "Handle Problems" (HNDLPROB) was given to questions that report how the respondent is able to deal with life events and life hassles. Hassles are the irritating, frustrating, distressing demands that to some degree characterize everyday transactions with the environment.4

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The indexed variables were crosstabulated with the relevant independent variables: age, gender, marital status, degree status of mother, degree status of father, respondent’s employment status, and respondent’s personal income.
CHAPTER 4
FINDINGS

Profile of the Sample

The sample’s mean age of 28 was used as a partitioner to divide the sample into two age categories: traditional and non-traditional students; as shown in Table 4-1. Traditional students were between the ages of 23 and 28, while non-traditional students were from 29 to 41. The largest percentage groups lie in the traditional student range between 24 and 25.

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td>27</td>
<td>8</td>
</tr>
<tr>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>29</td>
<td>10</td>
</tr>
<tr>
<td>30</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>33</td>
<td>2</td>
</tr>
<tr>
<td>34</td>
<td>2</td>
</tr>
<tr>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>38</td>
<td>2</td>
</tr>
<tr>
<td>41</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: Ages 23 through 28 were coded "traditional" and ages 29 through 41 were coded "non-traditional" to represent the independent variable Age.
Table 4-2 illustrates the gender distribution of the sample. Males comprised 56 percent of the sample, while females made up 44 percent of the surveyed population. Table 4-3 outlines income distribution of the sample.

**TABLE 4-2**
Gender Distribution of Sample

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>Female</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

**TABLE 4-3**
Income Distribution of Sample

<table>
<thead>
<tr>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>27</td>
</tr>
<tr>
<td>Unemployed</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
</tbody>
</table>

Tests of the Hypotheses

**Hypothesis 1**

The distribution of “General Center” stress by Age is shown in Table 4-4. The data rejected the hypothesis that traditional students would report less adverse affects of stress than non-traditional students. Twenty-one non-traditional students reported low stress compared to 20 traditional students, which comprised 82 percent of the sample.
Conversely, seven traditional students disclosed they felt higher levels of stress while only two non-traditional students reported high stress. The chi-square test showed a weak association between the variables ($x^2=0.39$).

| TABLE 4-4 |
| Distribution of "General Center" Stress by Age |

<table>
<thead>
<tr>
<th>Stress</th>
<th>Traditional</th>
<th>Non-traditional</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>20</td>
<td>21</td>
<td>41 82</td>
</tr>
<tr>
<td>High</td>
<td>7</td>
<td>2</td>
<td>9 18</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>23</td>
<td>50 100</td>
</tr>
</tbody>
</table>

Chi-square=0.39980 with 1 Degree of Freedom

Tables 4-5 and 4-6 are consistent with the results of the previous data and do not support the hypothesis. In Table 4-5, “Emotional Center” stress by Age, the low stress data is identical to Table 4-4; however, only three traditional students reported high stress in comparison to six non-traditional students. Among those reporting high stress, three traditional students and six non-traditional students reported they felt greater stress levels. Chi-square yielded an identical score.

“Handle Problems” stress by Age, outlined in Table 4-6, continued to support the null hypothesis, while chi square showed a stronger significance ($x^2=0.87$) between the variables. Seventeen non-traditional students reported low stress compared to 15 traditional students. Ten non-traditional students reported high stress in contrast to eight traditional students.
Hypothesis 2

Table 4-7 illustrates the relationship of “General Center” stress by Gender. The hypothesis is supported with 24 male respondents reporting low stress in comparison to 17 females. Four males and five males reported high stress. Chi-square showed a near perfect association between the variables ($\chi^2=0.98$).

The data in Table 4-8, “Emotional Center” by Gender, also supports the hypothesis with 23 males and 18 females reporting low stress. Data for high stress shows
five males and four females responding in the affirmative. The scores from chi-square also show near-perfect association ($x^2=0.98$).

**TABLE 4-7**
Distribution of "General Center" Stress by Gender

<table>
<thead>
<tr>
<th>Stress</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>24</td>
<td>17</td>
<td>41</td>
<td>82</td>
</tr>
<tr>
<td>High</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>

Total Stress = 28 Male / 22 Female / 50 Total

Chi-square=0.97634 with 1 Degree of Freedom

**TABLE 4-8**
Distribution of "Emotional Center" Stress by Gender

<table>
<thead>
<tr>
<th>Stress</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>23</td>
<td>18</td>
<td>41</td>
<td>82</td>
</tr>
<tr>
<td>High</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>

Total Stress = 28 Male / 22 Female / 50 Total

Chi-square=0.97634 with 1 Degree of Freedom
The null hypothesis was supported in Table 4-9. More respondents reported high levels of stress in “Handle Problems” stress by Gender. Only three males and five females responded with low stress, but 25 males and 17 females felt high stress in situations of handling everyday problems and duties. Chi-square revealed very low association \( (x^2=0.25) \) with the variables.

<table>
<thead>
<tr>
<th>Stress</th>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Male</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>High</td>
<td>Male</td>
<td>25</td>
<td>17</td>
<td>42</td>
<td>84</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>28</td>
<td>22</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi-square=0.25008 with 1 Degree of Freedom

**Hypothesis 3**

Table 4-10 gives the distribution of “General Center” stress by Employment Status, which rejected the hypothesis. Twenty-one unemployed students reported low stress compared to 20 employed students. The majority of students reporting low stress was contrasted with only two unemployed students and seven employed students reporting high stress. Chi-square \( (x^2=0.52) \) showed only moderate significance.
TABLE 4-10
Distribution of "General Center" Stress by Employment Status

<table>
<thead>
<tr>
<th>Stress</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Total</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>21</td>
<td>20</td>
<td>41</td>
<td>82</td>
</tr>
<tr>
<td>High</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>27</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi-square=0.52331 with 1 Degree of Freedom

"Emotional Center" stress by Employment Status is represented in Table 4-11. The distribution supports the hypothesis with 23 employed students reporting low stress in comparison with 18 unemployed students. Five unemployed students and four employed students complained of high stress. Chi-square yielded an identical score.

TABLE 4-11
Distribution of "Emotional Center" Stress by Employment Status

<table>
<thead>
<tr>
<th>Stress</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Total</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>18</td>
<td>23</td>
<td>41</td>
<td>82</td>
</tr>
<tr>
<td>High</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>27</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi-square=0.52331 with 1 Degree of Freedom

The hypothesis was also rejected in Table 4-12. "Handle Problems" by
Employment Status showed 17 unemployed students and 15 employed students reported low stress. High stress was reported by six unemployed and 12 employed students. Chi-square did not show any relationship between the variables ($x^2=0.18$).

**TABLE 4-12**
Distribution of “Handle Problems” Stress by Employment Status

<table>
<thead>
<tr>
<th>Stress</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Total</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>17</td>
<td>15</td>
<td>32</td>
<td>64</td>
</tr>
<tr>
<td>High</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>27</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi-square=0.17772 with 1 Degree of Freedom

**Hypothesis 3**

Table 4-13 gives a simplistic version of Table 4-4 that continues to support the null hypothesis. With 21 non-traditional students (46 percent of the sample) reporting low stress and only two reporting high stress, it is clear that non-traditional students do not have more general stress.

**TABLE 4-13**
General Stress and Its Effects on Older Students

<table>
<thead>
<tr>
<th>General Stress</th>
<th>Non-Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>21</td>
</tr>
<tr>
<td>High</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
</tr>
</tbody>
</table>
Multivariate Analyses

Strong associations between variables arose when another variable was introduced into the bivariate tables. The strongest associations were found with multivariate analyses of the independent and dependent variables and two independent variables: Mother’s Degree and Father’s Degree. The dependent variables doubled as control variables.

Mother’s Degree

“General Center” Stress

Table 4-14 shows “General Center” stress by Mother’s Degree controlled for age, gender, and employment status. Throughout the table, there are high percentages of sample respondents that report high stress, rejecting Hypothesis 1 that specific sample respondents would report low stress.

When controlled for age, 78 percent of traditional age students and 93 percent of non-traditional students reported high stress, while 22 percent of traditional and seven percent of non-traditional students reported low stress when their mother’s education was at college level or greater. Conversely, 67 percent of traditional age students and 89 percent of non-traditional students reported high stress, while 33 percent of traditional age and 11 percent of non-traditional age students reported low stress when mother’s degree was equal to or less than high school level education.

In gender distribution, 89 percent of males and 77 percent of females reported high stress, while 11 percent of males and 23 percent of females reported low stress when mother’s education was at college level or greater. Seventy-eight percent of males and females reported high stress levels, and 22 percent of males and females reported low stress when mother’s degree was at maximum high school level.
TABLE 4-14
"General Center" Stress by Mother's Degree (%)

<table>
<thead>
<tr>
<th>Stress</th>
<th>Age</th>
<th>Gender</th>
<th>Work Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Traditional</td>
<td>Male</td>
</tr>
<tr>
<td>Low</td>
<td>22</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>High</td>
<td>78</td>
<td>93</td>
<td>89</td>
</tr>
<tr>
<td>Low</td>
<td>33</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>High</td>
<td>67</td>
<td>89</td>
<td>78</td>
</tr>
</tbody>
</table>
Unemployed students showed the highest stress figures with 93 percent unemployed and 76 employed students reporting high stress, and seven percent unemployed and 24 percent employed students reporting low stress when mother’s education is college level or better. In contrast, 88 percent unemployed and 70 employed students reported high stress, and 13 percent unemployed and 30 employed students reported low stress when mother’s education was at maximum high school level.

“Emotional Center” Stress

Table 4-15 illustrates “Emotional Center” stress by Mother’s Degree, which shows variations of support and rejection for Hypothesis 2. In table 4-15, 61 percent of traditional age students and 71 percent of non-traditional age students report low stress (which rejects the hypothesis), while 39 percent traditional age and 29 percent of non-traditional students reported high stress, when mother’s education was at least at college level. Conversely, 78 percent of traditional students and 22 percent of non-traditional students reported high stress, and 22 percent of traditional age and 78 percent of non-traditional age students reported high stress when mother’s education was at high school level or lower.

Fifty-eight percent of males in the sample reported low stress compared to 77 percent of females, rejecting the hypothesis. Forty-two percent of males and 23 percent of females reported high stress when mother’s education was at college level or better. When mother’s education was at maximum high school level, 67 percent of males and 33 percent of females reported high stress, while 33 percent of males and 67 percent of females reported low stress.

Employment status figures, however, support the hypothesis. Unemployed students reported high stress by 87 percent while employed students reported 41 percent high stress. Thirteen percent of unemployed students and 59 percent of employed students
<table>
<thead>
<tr>
<th>Stress</th>
<th>Age Traditional</th>
<th>Age Non-Traditional</th>
<th>Gender Male</th>
<th>Gender Female</th>
<th>Work Status Unemployed</th>
<th>Work Status Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>61</td>
<td>71</td>
<td>58</td>
<td>77</td>
<td>13</td>
<td>59</td>
</tr>
<tr>
<td>High</td>
<td>39</td>
<td>29</td>
<td>42</td>
<td>23</td>
<td>87</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stress</th>
<th>Age Traditional</th>
<th>Age Non-Traditional</th>
<th>Gender Male</th>
<th>Gender Female</th>
<th>Work Status Unemployed</th>
<th>Work Status Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>22</td>
<td>78</td>
<td>33</td>
<td>67</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>High</td>
<td>78</td>
<td>22</td>
<td>67</td>
<td>33</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>
reported low stress when mother’s education was at least at the college level. Equal measurements were reported when mother’s education was at best high school level. Both employed and unemployed students reported stress levels at the 50 percentile.

"Handle Problems"

Table 4-16 illustrates the relationship between “Handle Problems” stress and Mother’s Degree, and the majority of the results support the hypotheses. When looking at age, 83 percent of traditional age students and 71 percent of non-traditional age students reported low stress, while 17 percent of traditional students and 29 percent of non-traditional students reported high stress when mother’s degree was at least college level. Conversely, 100 percent of traditional age students and 89 percent of non-traditional students reported low stress. Only 11 percent of non-traditional students reported high stress when mother’s education was at the high school level or below.

Eighty-four percent of males and 69 percent of females reported low stress, and 16 percent of males and 31 percent of females reported high stress when mother’s education was at least college level. Again, 100 percent of males and 89 percent of females reported low stress, while 11 percent of females reported high stress when mother’s education was at maximum high school level.

The examination of employment status splits the support for the hypothesis. Eighty percent of the unemployed sample and 76 percent of employed students reported low stress, while 20 percent of unemployed students and 24 percent of employed students reported high stress when mother’s education was at least college level. This marginally rejects the hypothesis. However, 88 percent of unemployed students and 100 percent of employed students reported low stress, while 13 percent of unemployed students reported high stress when mother’s education was at maximum high school level. This clearly supports the hypothesis.
<table>
<thead>
<tr>
<th>Stress</th>
<th>Age</th>
<th>Gender</th>
<th>Work Status</th>
<th>Mother's Degree ≥ College</th>
<th>Mother's Degree ≤ High School</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Traditional</td>
<td>Non-Traditional</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Low</td>
<td>83</td>
<td>71</td>
<td>84</td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>High</td>
<td>17</td>
<td>29</td>
<td>16</td>
<td></td>
<td>31</td>
</tr>
</tbody>
</table>
Father's Degree

"General Center"

Table 4-17 shows "General Center" stress by Father's Degree controlled for age, gender, and employment status. Throughout the table, there are high percentages of respondents that report high stress, rejecting the first hypothesis that specific students would report low stress.

When controlling for age, 78 percent of traditional age students and 94 percent of non-traditional students reported high stress, while 22 percent of traditional and six percent of non-traditional students reported low stress when their father's education was at college level or greater. Conversely, 67 percent of traditional age students and 80 percent of non-traditional students reported high stress, while 33 percent of traditional age and 20 percent of non-traditional age students reported low stress when father's degree was equal to or less than high school level education.

Regarding gender distribution, 90 percent of males and 81 percent of females reported high stress, while 10 percent of males and 19 percent of females reported low stress when father’s education was at college level or greater. Seventy-five percent of males and 67 percent of females reported high stress levels, while 25 percent of males and 33 percent of females reported low stress when father’s degree was at maximum high school level.

Unemployed students showed the highest stress figures with 95 percent unemployed and 76 employed students reporting high stress, and five percent unemployed and 24 percent employed students reporting low stress when father’s education is college level or better. In contrast, 75 percent unemployed and 70 employed students reported high stress, and 25 percent unemployed and 30 employed students reported low stress when father’s education was at maximum high school level.
<table>
<thead>
<tr>
<th>Stress</th>
<th>Age</th>
<th>Gender</th>
<th>Work Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Traditional</td>
<td>Male</td>
</tr>
<tr>
<td>Low</td>
<td>22</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>High</td>
<td>78</td>
<td>94</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>High</td>
<td>67</td>
<td>80</td>
<td>75</td>
</tr>
</tbody>
</table>

**Mother's Degree ≥ College**

**Mother's Degree ≤ High School**
Table 4-18 illustrates “Emotional Center” stress by Father’s Degree, which shows variations of support and rejection for Hypothesis 2. In table 4-18, 50 percent of traditional age students and 78 percent of non-traditional age students report low stress, rejecting the hypothesis, while 50 percent traditional age and 22 percent of non-traditional students reported high stress, when father’s education was at least at college level. Conversely, 56 percent of traditional students and 40 percent of non-traditional students reported high stress, and 44 percent of traditional age and 60 percent of non-traditional age students reported high stress when father’s education was at high school level or lower.

With respect to gender, 60 percent of males in the sample reported low stress compared to 69 percent of females, rejecting the hypothesis. Forty percent of males and 31 percent of females reported high stress when father’s education was at college level or better. When father’s maximum education was at high school level, 75 percent of males and 17 percent of females reported high stress, while 25 percent of males and 83 percent of females reported low stress.

Employment status figures also reject the hypothesis. Unemployed students reported high stress by 32 percent while employed students reported 41 percent high stress. Sixty-eight percent of unemployed students and 59 percent of employed students reported low stress when father’s education was at least at the college level. Even statistics were reported when father’s maximum education was at high school level. Both employed and unemployed students reported stress levels at the 50 percentile.

Table 4-19 illustrates the relationship between “Handle Problems” stress and Father’s Degree. When looking at age, 89 percent of traditional age students and 83 percent of non-traditional age students reported low stress, while 11 percent of traditional
<table>
<thead>
<tr>
<th>Stress</th>
<th>Age</th>
<th>Gender</th>
<th>Work Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Traditional</td>
<td>Male</td>
</tr>
<tr>
<td>Low</td>
<td>50</td>
<td>78</td>
<td>60</td>
</tr>
<tr>
<td>High</td>
<td>50</td>
<td>22</td>
<td>40</td>
</tr>
</tbody>
</table>

**Mother's Degree ≥ College**

<table>
<thead>
<tr>
<th>Stress</th>
<th>Age</th>
<th>Gender</th>
<th>Work Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>69</td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>High</td>
<td>31</td>
<td></td>
<td>32</td>
</tr>
</tbody>
</table>

**Mother's Degree ≤ High School**

<table>
<thead>
<tr>
<th>Stress</th>
<th>Age</th>
<th>Gender</th>
<th>Work Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>67</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>High</td>
<td>83</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Stress</td>
<td>Age</td>
<td>Gender</td>
<td>Work Status</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Traditional</td>
<td>Non-Traditional</td>
<td>Male</td>
</tr>
<tr>
<td>Low</td>
<td>89</td>
<td>83</td>
<td>85</td>
</tr>
<tr>
<td>High</td>
<td>11</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Low</td>
<td>89</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>High</td>
<td>11</td>
<td>40</td>
<td>0</td>
</tr>
</tbody>
</table>
students and 17 percent of non-traditional students reported high stress when father’s degree was at least college level. Conversely, 89 percent of traditional age students and 60 percent of non-traditional students reported low stress. Only 11 percent of traditional students and 40 percent of non-traditional students reported high stress when father’s education was at the high school level or below.

Eighty-five percent of males and 88 percent of females reported low stress, and 15 percent of males and 13 percent of females reported high stress when father’s education was at least college level, which rejects the hypothesis. One hundred percent of males and 50 percent of females reported low stress, while 50 percent of females reported high stress when Father’s education was at maximum high school level.

The examination of employment status splits the support for the hypothesis. Eighty-nine percent of the unemployed sample and 82 percent of employed students reported low stress, while 11 percent of unemployed students and 18 percent of employed students reported high stress when father’s education was at least college level. This marginally rejects the hypothesis. However, 50 percent of unemployed students and 90 percent of employed students reported low stress while 50 percent of unemployed students and 10 percent of employed students reported high stress when father’s education was no more than high school level, thus supporting the hypothesis.
CHAPTER 5
DISCUSSION AND SUMMARY

Review of the Study

African American graduate students play an important part in the future of African Americans as a whole. The intention of this study is to identify common stressors to African American graduate students in order that educators and other professionals may develop better programs and methods to counteract their attrition.

A variation of Koeske and Koeske’s (1991) “stress leads to strain (burnout) which leads to outcome” model, which identified the three types of stress as event, felt, and conflict, was used to provide a measurement of stress. The measurements were altered to reflect an atmosphere that encompassed a more general environment that included school scenarios.

The questionnaire was modified from the “Perceived Stress Scale” (Cohen, Kamarck, and Mermelstein, 1983), consisting of 14 items designed to identify the degree that respondents found their lives unpredictable, uncontrollable, and overloading.¹ All 14 questions comprised the first half of what became “A Study of Life in Graduate School,” the 30-item measurement. The latter portion of the “Study of Life” consisted of personal information questions that served the independent variables.

A convenience sample consisting of 50 graduate students enrolled in a

A convenience sample consisting of 50 graduate students enrolled in a comprehensive university in the Southeastern United States was assembled for this study. All of the sample respondents resided in the same dormitory. Respondents were given 24 hours to complete the questionnaires and return them to the dormitory director. All of the questionnaires were returned, and results tabulated with no missing data.

Data that related to stress-response were put through a factor analysis and a factor matrix was created to discern the questions that manifested strong associations. The matrix was rotated and re-ordered, producing three distinct variables to represent the dependent variable, stress. In the final result, one item was deleted due to its consistent weakness. A factor correlation assured the variables were distinct and the dependent variables were labeled “General Center,” “Emotional Center,” and “Handle Problems.”

In deriving the results, the dependent variables were cross-tabulated with the independent variables to test their association. The findings mostly reject the hypotheses, but common stressors were identified.

It was found that students were able to effectively cope with the most of the stressful situations in their lives. This provides a stark contrast from the literature which reported overwhelmingly that African American students suffered from stress while adjusting to their university environment and their encounters with peers and faculty members who were perceived as having negative feelings toward them.

A key problem area was revealed when sample members reported their feelings regarding life event and daily hassles stressors. The results indicate that black students find it difficult to respond positively to these stressors. Males appear, by a diminutive margin, to have a more troublesome time than females. This was the only section where majority adverse stress-response was reported in the entire study.

One indication of this result is that life events and daily hassles are not gender-specific. These stressors are indicative of marriage, career, birth of a new baby, or death
lives. Faculty and instructors regard graduate students as more independent and self-sufficient than undergraduates, thereby not being sensitive to their other obligations and not assessing their well-being. Instructors may need to be aware that while very important, school may not necessarily be the paramount issue in a graduate student’s life.

Given that assertion, it is safe to speculate that African American graduate students who attend predominantly white universities may not only be suffering from similar stressors, but have to contend with the additional stress of minority-status and/or racial stressors. This would lead to the notion that predominantly African American universities are more conducive to African American academia.

Viability of Predominantly African American Universities

Previous literature has found that, “blacks drop out of higher education at a significantly higher rate than whites, [but it is not] clear how race interacts with the various factors that influence persistence.”2 As Aitken (1982) suggested:

We simply do not know enough about the processes of interaction that lead individuals of different racial backgrounds to drop out from higher education. Nor do we know enough about how these processes relate to differing patterns of academic and social integration or how they vary between institutions of different academic and social characteristics.3

According to the literature, the most important factors in continued black student enrollment over a four-year period are positive self-concept, realistic self-appraisal, and


familiarity with the academic requirements and demands of the institution attended.\footnote{Pascarella, 354.}

However, these are virtually the very factors under siege at predominantly white institutions. To ensure academic success, African American students need to find environments where their needs can be met without additional stressors found on white campuses.

In addition, minority-status and racial stressors are quite prevalent in everyday society -- not just on a predominantly white university campus. To suggest that students who attend predominantly African American universities get their “fair share” of minority-status scenarios can be considered an understatement. Modern American society is filled with these situations that can cause minorities, particularly African Americans, strain and distress without having to search for them.

The findings would suggest that the better environment for academics for African American graduate students is at predominantly African American universities. Beyond contributing to a sense of dignity and self-worth of their students, black colleges and universities have made major contributions to the development of their students.\footnote{Charles V. Willie, “Black Colleges are Not Just for Blacks Anymore,” \textit{Journal of Negro Education} 63, no. 2 (1994): 154.} Willie (1978) points out:

The following statements by two Black college presidents are representative of others. One said, “We take the time necessary and provide the faculty required to reach students where they are when they come to college and help prepare them for successful productive participation in an expanding American society.” Another said, “[This] school has always used its resources to get an education for every student that be reasonably brought into its fold.”\footnote{Charles V. Willie, “Racism, Black Education and the Sociology of Knowledge,” in \textit{Black Colleges in America}, ed. C.V. Willie and R.R. Edmonds (New York: Teachers College Press, 1978), 7.}
African American colleges and universities have difficulty getting through to the public what they do and how well they do it due to a problem in public relations. The United Negro College Fund (UNCF) holds an annual telethon to raise monies for a great number of African American universities; however, their cause is cheapened because these schools receive collective support and exposure. This can be contrasted with the individual exposure predominantly white schools receive weekly while their respective football teams play in nationally televised National Collegiate Athletics Association (NCAA) games.

Reducing Graduate Student Stress

An answer to counteracting adverse stress-response is to provide mentors in various departments that offer graduate programs. A significant, positive relationship was found between having a mentor during one's degree program and later occupational status. In this way, students could have a more personal relationship with an individual who has previously completed the same academic journey the present student is currently undergoing. If an effort were made to provide stability for students, it could promote racial tolerance and allow students to feel less inhibited toward the majority society.

It was suggested in the literature that predominantly African American institutions increase their white enrollment. Willie (1994) conveys:

Attendance at a predominantly Black college or university could ... eliminate ... the myth of the inherent inferiority of all Blacks and the myth of the inherent superiority of all Whites ... Beyond achieving a more comprehensive self-concept, Whites who attend predominantly Black colleges and universities


as a minority population could obtain a better concept of others.\textsuperscript{9}

In expanding the literature, a study should be conducted on whites who attend predominantly African American universities to determine if there is a pattern of minority-status stress where whites students are the minority group. If such a pattern is discovered, it would further validate the findings of this study as well as draw greater attention to the needs of minority students in general.

Just as the Freedmen’s Bureau raised money to support schools to educate African Americans 130 years ago, black colleges and universities continue to require that support. But these institutions have been able to provide and maintain many of the services the Bureau had initially hoped they would: to furnish a quality education and an atmosphere conducive to learning. Through continued efforts, these situations can only improve.

\textsuperscript{9}Willie (1994), 157.
The Perceived Stress Scale
Cohen, Kamarck, and Merlstein, 1983

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don’t try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

For each question choose from the following alternatives:

0. Never
1. Almost never
2. Sometimes
3. Fairly often
4. Very often

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and “stressed”?
4. In the last month, how often have you dealt successfully with irritating life hassles?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things that you had to do?
9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?

11. In the last month, how often have you been angered because of things that happened that were outside of your control?

12. In the last month, how often have you found yourself thinking about things that you have to accomplish?

13. In the last month, how often have you been able to control the way you spend your time?

14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

*aScored in the reverse direction.*
APPENDIX B

A STUDY OF LIFE IN GRADUATE SCHOOL*
*Modified from the Perceived Stress Scale (Cohen, Kamarck, and Mermelstein, 1983)

INSTRUCTIONS: The questions in this section ask about your feelings and thoughts IN THE PAST MONTH. Please answer each question quickly. Respond to each question by checking the box below the most appropriate response.

<table>
<thead>
<tr>
<th>Very Often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. In the last month, how often have you been upset because of something that happened unexpectedly?

2. In the last month, how often have you felt that you were unable to control the important things in your life?

3. In the last month, how often have you felt nervous or "stressed"?

4. In the last month, how often have you dealt successfully with irritating life hassles?

5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
<table>
<thead>
<tr>
<th>Question</th>
<th>Very Often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. In the last month, how often have you felt confident about your ability to handle your personal problems?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7. In the last month, how often have you felt that things were going your way?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8. In the last month, how often have you found that you could not cope with all the things that you had to do?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>9. In the last month, how often have you been able to control irritations in your life?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>10. In the last month, how often have you felt that you were on top of things?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>11. In the last month, how often have you been angered because of things that happened outside of you control?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>12. In the last month, how often have you found yourself thinking about things that you have to accomplish?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>13. In the last month, how often have you been able to control the way you spend your time?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

15. How old are you?

16. What is your gender?

17. What is your current marital status?

18. How religious do you consider yourself to be?

19. What program of study/school are you enrolled in?

20. How are you paying for most of your education? (check all that apply)

21. Has your graduate school training been interrupted recently?
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. If yes, within what period?</td>
<td>1 semester, 2 semesters, 3 semesters, 4 semesters</td>
</tr>
<tr>
<td>23. What is the highest degree attained by your mother?</td>
<td>Less than high school, High school, Junior college, Bachelor, Graduate, Post-graduate</td>
</tr>
<tr>
<td>24. What is the highest degree attained by your father?</td>
<td>Less than high school, High school, Junior college, Bachelor, Graduate, Post-graduate</td>
</tr>
<tr>
<td>25. Do you receive financial assistance from family members?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>26. If yes, how often?</td>
<td>About once a month, About twice a year, About four times a year, About once a year</td>
</tr>
<tr>
<td>27. Are you employed?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>28. If yes, full or part-time?</td>
<td>Full-time, Part-time</td>
</tr>
<tr>
<td>29. What is your job title and/or occupation?</td>
<td></td>
</tr>
</tbody>
</table>
30. What was your total personal income from ALL sources last year?

- [ ] $0.00 - $9,999
- [ ] $10,000 - $14,999
- [ ] $15,000 - $19,999
- [ ] $20,000 - $24,999
- [ ] $25,000 - $29,999
- [ ] $30,000 - $34,999
- [ ] $35,000 - $39,999
- [ ] $40,000 - $44,999
- [ ] $45,000 - $49,999
- [ ] $50,000 - Over

Thank you for your participation!
REFERENCES


Astin, A.W. 1975. *Preventing Students from Dropping Out*.


Mallinckrodt, Brent and Frederick T.L. Leong. 1992. Social support in academic programs and family environments: Sex differences and role conflicts for graduate students. *Journal of Counseling and Development* 70 (July/August): 716-723.


