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The relationship between age and factors that influence the academic success of undergraduate female students

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THE RELATIONSHIP BETWEEN AGE AND FACTORS THAT INFLUENCE THE ACADEMIC SUCCESS OF UNDERGRADUATE FEMALE STUDENTS

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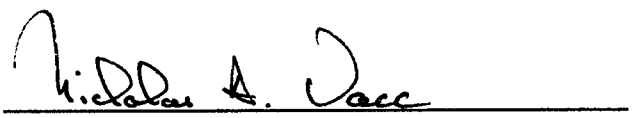

Dissertation Advisor

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This study investigated whether perceptions of undergraduate female students' (a) reasons for attending university, (b) barriers associated with attending university, (c) preferences for student support services, (d) sources of emotional support (i.e., family, spouse, significant other), (e) sources of role strain, and (f) degree of instrumental support (i.e., help with household tasks) vary by age. The instrument used in this study was developed by the researcher on the basis of the literature and mailed to a sample of undergraduate female students at UNCG. Responses were received from 332 students.

A series of confirmatory factor analyses (CFA) was performed to determine if the items comprising the six putative scales of the instrument loaded on a separate factor. A separate regression analysis was conducted for each research question to determine the proportion of variance in each of the dependent variables (Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, and Instrumental Support) accounted for by the independent variable, age.

In general, the results of the factor analysis lend support to the six scales presumably measured by the instrument. For one scale, all but two items loaded on a single factor; for most scales, items that were similar either clustered on a single or two factors. Results of the regression analyses indicated that for Reasons for Attending, Perceived Barriers, Role Strain, and Instrumental Support, age contributed significantly to the explanation of performance on these dependent variable scales, suggesting that as age

increases, so do the number of reasons for attending university, perceived barriers to attending university, perceived sources of role strain, and perceived degrees of instrumental support. Age was unrelated to the variables Support Services and Emotional Support; age did not significantly account for differences in perceived needs for students support services and perceived degrees of emotional support.

Though not part of the design of this study, three additional analyses were performed using the demographic data from the sample to determine the extent to which stage (year) in academic program, part- and full-time status, and age group (17-21, 22-32, 33-40, 41 and over) account for differences on the dependent variables (Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, Instrumental Support) used in the study. Significant results were found on the dependent measures with part-full-time status and age group. Stage (year) in academic program did not account for significant differences in any of the dependent measures.

APPROVAL PAGE

This dissertation has been approved by the following committee of the faculty of the Graduate School at The University of North Carolina at Greensboro.

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for your support. Finally, to Phyllis, my spouse and "best friend," you have provided me with unconditional love, patience, and support; I hope I can enrich our lives with what you've helped me accomplish.

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CHAPTER I

INTRODUCTION

Higher education faces a set of difficult issues in the 1990s, one of which is changing enrollment patterns. While the enrollment of traditional-age college students has been decreasing since the 1960s, the percentage of nontraditional students has been steadily increasing (Hu, 1985). The number of students aged 18 to 24 increased by 4% from 7.3 million in 1982 to an estimated 7.7 million in 1990 (National Center for Education Statistics, 1991). The number of students aged 25 years and older increased by 26% from 4.8 million in 1982 to 6.1 million in 1990 (National Center for Education Statistics, 1991). This increasing number of nontraditional students reentering postsecondary education will create a very important challenge as colleges and universities try to meet their different and complex needs.

A large percentage of the increase of nontraditional students has been related to an increasing participation of women in higher education. This trend was first noted in the late 1970s and early 1980s, when primarily women and part-time students began to enroll in college in greater numbers (National Center for Education Statistics, 1991). The enrollment of women in college increased from 5.5 million in 1977 to an estimated 7.5 million in 1990, representing a growth rate of 2.4% and a 37% increase over the period; the growth rate for men for this same period was 1.1%, representing a 15% increase (National Center for Education Statistics, 1991). In 1990 women represented 54% of total college enrollment, as compared with 49% in 1977 (National Center for Education Statistics, 1991).

Projections for male and female enrollments in institutions of higher education suggest that in the future females will continue to outnumber males in participation in postsecondary education, especially among the nontraditional population. According to projections of the National Center for Education Statistics (1991), enrollment in institutions of higher education is expected to increase 13% for males and 28% for females during the years from 1990-1991 to 2000-2001. In fact, females will represent 56% of student enrollments by the year 2002 (National Center for Education Statistics, 1991). Enrollment projections for the late 1990s are expected to be higher for females who are 25 years and older than for males in the same age range (National Center for Education Statistics, 1991).

The influx of larger numbers of female reentry students will have a significant impact on the programs and services offered by colleges and universities. Except for institutions serving female students only, higher education academic programs and student services originally were designed for predominantly white, male, middle-or upper-class, full-time residential students (Thon, 1984). Student services have traditionally been oriented toward the group of 18- to 24-year-olds who have made up the vast majority of the student population (Thon, 1984). With these changing demographics, administrators and faculty, therefore, need to be more knowledgeable about female reentry students and how they may differ from their younger counterparts, to ensure that academic and student services programs are effective for all students.

Terminology

Various terms have been used to describe the growing number of adults reentering postsecondary education. Cross (1980) used the term "nontraditional student" and defined it as an adult who, typically, is over the age of 25 and is returning to school full- or part-time while maintaining responsibilities such as employment and family. Similarly, Spanard (1990) defined "adult student" as being older than 25, taking a half-time or less course load, living off campus and commuting to classes, working part time, and generally having some responsibility for contributing to family finances. Another term used to describe this category of students is "reentry student," a person who returns to the educational system after having left it for 5 to 25 years or more (Chandler, 1984; Molstad, 1984; Henry, 1985). Other terms used to describe this category are "adult returning student" (Knowles, 1980), "adult learner" (Knowles, 1980) and "returning student" (Benshoff, 1991).

Various specialized terms have also been used to describe female reentry students. These include returning "female learners" (St. Pierre, 1989), "reentry female students" (Chandler, 1984; Molstad, 1984; Wheaton & Robinson, 1983), "adult college women" (Freilano & Hummel, 1985), "nontraditional or mature students" (Sands & Richardson, 1984), and "empty nesters" (Adelstein, Sedlacek, & Martinez, 1983; Suchinsky, 1982). For purposes of consistency within this research, "reentry students," as defined by Chandler (1984), Molsted (1984), and Henry (1985) will be used.

Need for the Study

Studies are abundant describing the population of reentry students to include demographics such as age and marital status (Brandenburg, 1974; Bruce, Hart & Sullivan, 1990; Roehl & Okun, 1985; Molstad, 1984); motivation or

reasons for returning to school such as self-esteem, self-improvement and/or vocational, or economic needs (Adelstein, 1983; Astin, 1976; Betz, 1982; Brandenburg, 1974; Clayton & Smith, 1987; Farmer & Fyans, 1983); barriers associated with attending school such as guilt, child care, and economics (Kahnweiler & Johnson, 1980; Molstad, 1984; Spreadbury, 1983; Terrell, 1990; Wheaton & Robinson, 1983); and needs such as evening classes, academic support services, support groups, and counseling services for older students (Aslanian, 1980; Barkhymer & Dorsett, 1991; Bruce, Hart, & Sullivan, 1990; Blanshan, Burns, & Geib, 1984; Byrd, 1990; Kasworm, 1980; Lamb-Porterfield, Jones, & McDaniel, 1987; Martin, 1988; Rawlings, 1979; Smallwood, 1980; Spratt, 1984).

An extensive body of literature has developed on female reentry students including characteristics, motivations, problems, and institutional responses. However, few studies exist that address differences between these two groups. If colleges and universities expect to attract and retain mature, female reentry students and continue to address the needs of the traditional female student population, they must have more knowledge concerning whether unique differences exist between this group and traditional age college females. Previous research has compared reentry students with traditional students on the basis of their values (Jones, 1990; Pirnot & Dunn, 1983); personality characteristics (Kuh & Ardaiolo, 1979); preferred learning environment (Kuh & Sturgis, 1980); satisfaction with academic and support services (Kasworm, 1980); school-related anxiety (Yarbrough & Schaffer, 1989); and academic performance (Leppel, 1984). Yet, there exist no comprehensive studies which identify a full range of features of traditional and reentry female students in such a way as to provide significantly

increased understanding of how these two groups differ. In addition, the research seems to have overlooked the question of how increasing age may account for responses to institutional measures such as workshops to enhance academic skills, separate orientation sessions, child care, special courses for returning students, career development, and adult resources centers (Griff, 1987; Henry, 1985; Lamb-Porterfield, Jones, & McDaniel, 1987; Nayman, 1984; Rawlins & Lenihan, 1982; Richter-Anton, 1986; Smith & Regan, 1983; Steltpohenl & Shipton, 1986; Terrell, 1990; Thon, 1984; Wheaton & Robinson, 1983; Wilson & Christian, 1986).

Colleges and universities must have a fuller understanding of how their programs and services are likely to be effective for an increasingly diverse population of female students. Merely categorizing the female student population into "traditional" and "nontraditional" does not provide sufficient data for the commitment of institutional resources. An important explanation for differences among female students is age. Little research has been conducted on the effects of increasing age on issues concerning postsecondary education.

Purpose of the Study

This study has been designed to investigate whether there are variations due to age in female students' perceptions of several variables. These variables are as follows: (a) reasons for attending university, (b) barriers associated with attending university, (c) preferences for student support services, (d) sources of emotional support, (e) sources of role strain, and (f) degree of instrumental support. Three of these variables -- reasons for attending university, barriers associated with attending university, and preferences for student support services -- have appeared on many student

surveys of nontraditional students that are reported in the published research (Rawlins, 1979; Aslanian & Birckell, 1980; Martin, 1985; Thon, 1984). Three of the variables -- emotional support (Berkove, 1979; DeGroot, 1980; Huston-Hoberg & Strange, 1986), role strain (Dublon, 1983; Beutell & Greenhaus, 1983; Sales, Shore, & Bolitho, 1980; Van Meter & Agronow, 1982), and instrumental support (Berkove, 1979; Huston-Hoberg & Strange, 1986) -- have been researched to a lesser degree with reentry female students. These variables were selected for this study because of their association with female reentry students through previous research. They provide a comprehensive means to examine features in female students of all ages with a particular focus on whether increases in age account for differences.

Statement of the Problem

This study investigated whether perceptions of female students' (a) reasons for attending university, (b) problems associated with attending university, (c) preferences for student support services, (d) sources of emotional support (i.e., family, spouse, significant other), (e) sources of role strain, and (f) degree of instrumental support (i.e., help with household tasks) vary by age.

Research questions for this study included the following:

1. Do female students' perceived reasons for attending university vary by age?
2. Do female students' perceived barriers to attending university vary by age?
3. Do female students' perceived needs for certain types of student support services vary by age?
4. Do female students' perceived degrees of emotional support vary by age?

5. Do female students' perceived sources of role strain vary by age?
6. Do female students perceived need for instrumental support vary by age?

Definitions of Key Terms

Key terms which have specific meanings in the study include the following:

Female students: female college students who range in age from 17 to 60

Reasons for Attending University: the various reasons reported by female students for attending the postsecondary institution, such as (a) career; (b) present employment; (c) academic; (d) self-fulfillment; and (e) social relationships.

Barriers Associated with Attending University: reported barriers faced by students while attending university including (a) present employment; (b) family responsibilities; (c) family support; (d) financial; (e) child care; (f) academic work; (g) class scheduling; (h) admissions; (i) campus administration.

Support Services: those services and programs provided by the institution that address the following: (a) student welfare -- counseling/health services, financial aid, career planning and placement; (b) student activities -- extracurricular programs, student government, publications, student union, and cultural programs; (c) administrative -- admissions, registration, library, housing; (d) academic support -- orientation and special educational services.

Role Strain: perceived difficulty in fulfilling demands from others and self-imposed expectations (Kirk & Dorfman, 1983; Gerson, 1985; Van Meter & Argonow, 1982).

Emotional Support: approval and encouragement from spouse or significant other, children, parents, other family members, friends outside

school, students inside school, employer, co-workers, faculty advisor, other departmental faculty (Huston-Hoburg & Strange, 1986; Berkove, 1979).

Instrumental Support: perceived willingness by spouse, family, or significant other to help with household tasks (Huston-Hoburg & Strange, 1986; Berkove, 1979).

Organization of the Study

The study is presented in five chapters. Chapter I is an introduction to the growing phenomenon of the increasing number of older female students in colleges and universities. The chapter provides a brief description of the problem, an overview of some of the research on returning female students, the purpose of the study, the need for the study, statement of the problem, and definition of terms.

Chapter II provides a review of the literature under two main headings: (a) contrast of reentry students with traditional-age college students, and (b) features of female reentry students. Under the second heading studies are cited which focus on general characteristics of female reentry students, reasons female reentry students return to school, barriers to attending postsecondary education as perceived by female reentry students, institutional variables affecting female reentry students, and noninstitutional variables of reentry students.

Chapter III provides an explanation of the methodology used in the study. The analysis in Chapter III is directed in terms of the following: hypotheses, a description of the participants, reasons and methods for selecting the sample, a description of the instrument used in the analysis, factor analysis of the instrument, procedures for conducting the study, and an account of the data analysis methods for each of the research questions.

Chapter IV describes the results of the data analyses and includes additional analyses of demographic data (stage/year in academic program, part- and full-time student status, and age group) that further clarify the results of the study.

Chapter V includes a summary of the study, discussion of the conclusions, and implications for the profession. An examination of the limitations of the study and recommendations for further research are also included.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The literature review in this chapter has two emphases: (a) a contrast of the features of reentry students with those of traditional-age college students and (b) features of female reentry students. For the latter, features include: (a) general characteristics of reentry students, specifically females, (b) reasons for returning to postsecondary education, (c) barriers to reentry, (d) student support services, and (e) noninstitutional variables affecting female reentry students.

Contrast of Reentry Students with Traditional-age College Students

Some studies have identified characteristics that separate reentry students from traditional-age college students. Richter-Anton (1986) has identified six factors which distinguish reentry students from traditional students: (a) greater sense of purpose with high levels of motivation to achieve; (b) a stronger consumer orientation and view of education as an investment, perhaps related to self-financing of education; (c) increased commitments and responsibilities outside of school with resulting decrease in time flexibility; (d) greater life experience and emphasis on using these life experiences in the classroom; (e) lack of an age cohort, probably resulting from different developmental levels from younger students; and (f) limited social acceptability and support for student status, reflecting the fact that

returning to school is not the norm for adults who are traditionally expected to be focused on career and/or family activities.

Other studies have contrasted reentry students and traditional-age students on the basis of personal characteristics (Jones, 1990; Kuh & Ardaiolo, 1979; Pirnot & Dunn, 1983); relationships with the academic/institutional environment (e.g., reasons for returning to school) (Badenhoop & Johansen, 1980; Wolfgang & Dowling (1981); academic performance (Leppel, 1984); and preferences for counseling services from the institution (Mardoyan, Alleman & Cochran, 1983). Only one study, Kasworm (1980) has addressed whether age accounts for differences in needs of students.

Personal Characteristics

Jones (1990) used the Rokeach's Value Survey to examine value systems of male and female traditional-age college students as compared to the value systems of reentry-age college students. Results showed that traditional and reentry men valued themselves according to how they compete for the material wealth that provides a comfortable life, while women (traditional and reentry) value themselves by the quality of their interpersonal relationships. Reentry students in the study placed great emphasis on freedom and a world at peace while traditional students emphasized spiritual salvation and true friendship. As compared with males, who placed more emphasis on happiness, true friendship, and pleasure, reentry females valued spiritual salvation and national security. As a group the reentry students emphasized loving and being honest while traditional students placed more value on being polite and obedient. Jones' findings suggest that to some extent the traditional and nontraditional groups represent different cultural norms related to the different age groups.

The personality characteristics of traditional-age freshman students between 17 and 20 years of age were compared with personality characteristics of students who were 23 years of age or older to determine whether intellectualism and socio-emotional adjustment were different for the two groups (Kuh & Ardaiolo, 1979). Participants from a resident and commuter urban campus of a large midwestern university completed the Omnibus Personality Inventory (OPI). Significant differences were found on several OPI scales (e.g., reflective thought, problem solving, autonomy) for the two groups along with differences between the residential and commuter campuses. The Kuh and Ardaiolo (1979) study found that of traditional and reentry males on the residential campus, the older students were more likely to engage in reflective (introverted) thought and were more scientific in problem-solving orientation. Adult students in the study were more autonomous and tolerant of others than were the traditional students. When compared with the commuter urban campus, male adult learners at the residential campus were more interested in reflective thinking and the welfare of others. On the residential campus with traditional and nontraditional females, female adult learners were more flexible in their thinking, less authoritarian, and less interested in material possessions than traditional first-year women. When compared with the commuter campus, female adult learners at the residential campus exhibited more "feminine interests" and were less inclined to want to make a good impression than female learners at the commuter campus. The Kuh and Ardaiolo study pointed to the conclusion that adult learners scored higher on some of the intellectual and socio-emotional personality dimensions than traditional first-year students. Another finding of the study was that personality characteristics of

adult learners at the commuter campus tended to be more like traditional-age freshman than like the characteristics of adult learners at the residential campus.

Pirnot and Dunn (1983) investigated whether reentry students shared value preferences common to younger students or, whether due to age, older students would express value priorities more closely aligned with those of their age on the faculty and the adult population in general. Subjects for this study were students and faculty at Coe College in Cedar Rapids, Iowa who completed the Allport, Vernon, and Lindzey Study of Values. The Study of Values is a self-report instrument which measures six values: theoretic, economic, aesthetic, social, political, and religious. Pirnot and Dunn (1983) noted in their research that the rank order of the traditional adult hierarchy is as follows: religious, political, social, aesthetic, economic, theoretic. Results showed that reentry students expressed values quite similar to faculty and traditional students in the academic community and opposite the value hierarchy expressed by non-student adults.

Differences in test related anxiety between traditional and nontraditional students were examined by Yarbrough and Schaffer (1989). Nontraditional students (under age 25) and traditional students (25 years and older) completed three instruments measuring different dimensions of anxiety: State-Trait Anxiety Inventory (STAI), Test Anxiety Profile (TAP), and the Test Anxiety Inventory (TAI). According to the authors, the results were quite unexpected as younger students reported significantly higher degrees of anxiety than their older counterparts. Traditional students reported higher test anxiety (i.e., worry) scores on (TAI) and higher test anxiety scores (TAP) related to type of test taking (i.e., multiple choice, giving a speech) as opposed

to nontraditional students. No significant differences were reported for the STAI, which measures perception of anxiety producing situations. A possible explanation for the differences is that increased life experiences expands the repertoire of useful coping options that may be common with nontraditional students (Yarbrough & Schaffer, 1989).

Relationships with the Academic/Institutional Environment

Summarizing the literature on characteristics of reentry students, as contrasted with traditional-age students, Benshoff (1991) reported that reentry students, as contrasted with traditional-age students, generally prefer more active approaches to learning in which they can integrate academic learning with their personal experiences.

Badenhoop and Johansen (1980) found that older reentry female students reported returning to school for reasons that were similar to those of younger students. Their study, however, divided two groups of undergraduate females at the point of 28 years, with the younger group (continuous) having educational interruptions of less than four years and the older group (reentry) having interruptions of five years or more. The desire for a better job and the need for identity were cited by members of the continuous group as reasons for returning to school. The desire for a better job, the need for identity, and dissatisfaction with a present job were reasons given by the reentry group for returning to school.

Wolfgang and Dowling (1981) used the Education Participation Scale, an inventory of 48 possible reasons for participation in educational activities, to determine differences in motivation to enroll in higher education between 18- and 22-year-old students. Results of their research indicated that older students scored significantly higher on the motivation factor of "cognitive

interest" (e.g., learning just for the sake of learning). Traditional-age students indicated significant differences from older adult students in their reasons for enrolling in a college degree program by scoring higher on "personal relationships" (e.g., to make new friends) and "external expectations" (e.g., to carry out the recommendation of some authority).

Leppel (1984) investigated whether the academic performance of older returning students is superior to that of younger continuing (i.e., directly from high school) students. Data for this study were collected from an introductory course in economics and business statistics from The University of North Carolina at Greensboro. The results suggested that the performance of older returning students was superior to that of younger continuing students as evidenced by grade point average, continuing and returning women studied more hours than their counterpart male students, married students achieved higher grades than single students among both continuing and returning students, and affluent students (continuing and returning) earned lower grades than less affluent students.

Preferences of traditional-age and reentry students for counseling services were explored by Mardoyan, Alleman, and Cochran (1983). In their research they used a survey instrument which focused on the importance of selected operational features of a counseling service and topics likely addressed by students in using the counseling service. With operational features, older students preferred evening and weekend hours, and were not concerned about the age of the counselor; younger students indicated more preference for an older counselor and a preference for not needing an appointment to use the counseling services. Counseling topics were grouped under either "Interpersonal Concerns" and "General Life Concerns." Few

significant differences were found between the two groups although younger students appeared to have more concern with subtopics under General Life Concerns relating to career, job-seeking skills, and discrimination and harassment in the work place.

Age as a Variable

Only one study was identified which addresses whether age accounts for differences in needs of students. Using the Supportive Services Survey, Kasworm (1980) examined whether undergraduate students 18 to 22 years or 26 years and above differed in usage, perceived need, and satisfaction with student personnel and academic support services. Significant associations between age and usage, age satisfaction, and age and perceived need of certain support and academic services were found. Younger students in the study reported more usage of orientation programs, campus housing, physical health services, campus-affiliated religious centers, and remedial courses in mathematics and English. They also reported a higher level of satisfaction with orientation programs, campus housing, physical health services, campus-affiliated religious centers, and academic advisement; and they noted a greater need for such programs and services. The results of this study suggest that colleges and universities may not be adapting support services to the needs and characteristics of older students.

Summary of Contrast of Reentry Students with Traditional-age College Students

Salient points concerning the differences between reentry and traditional students are as follows. Some studies have identified features in which reentry students differ from traditional students, for example, that reentry students demonstrate a greater sense of purpose and have responsibilities outside of school (Richter-Anton, 1986), they hold down full-

time jobs and are likely to have families (Blanshan, 1984; Benshoff, 1991), and typically they have delayed or been interrupted in pursuing postsecondary education (Streeter, 1980). Other research addressed personal characteristics such as value systems (e.g., material wealth and interpersonal relationships) (Jones, 1990), personality characteristics (Kuh & Ardaiolo, 1979), values preferences (e.g., social and religious) (Pirnot & Dunn, 1983), Finally, some studies address differences in learning approach (Benshoff, 1991), reasons for attending postsecondary education (Badenhopp & Johansen, 1980; Wolfgang & Dowling, 1981), academic performance (Leppel, 1984), and counseling services (Mardoyan, Alleman, & Cochran, 1983). One study focused on whether age accounts for differences in needs for student support services (Kasworm, 1980).

Features of Female Reentry Students

Research reviewed below focuses on general characteristics of reentry students, with special emphasis on reentry female students; reasons female reentry students return to postsecondary education; barriers to attending postsecondary education as perceived by female reentry students; institutional variables affecting female reentry students; and noninstitutional variables of reentry students.

General Characteristics of Reentry Students, Specifically Female Reentry Students

Much of the research on reentry students, in general, applies to female reentry students as well as to their male counterparts. Some findings from the research are included in the following.

According to Richter-Anton (1986), reentry students are more likely to be Caucasian than to be members of a minority race. They are generally 25

years of age and older, with an average age between 36 and 40 (St. Pierre, 1989); they have some education beyond the high school years (St Pierre, 1989); and they have experienced an educational hiatus of an average of five years (St. Pierre, 1989; Benshoff, 1991, citing Aslanian, 1990; Streeter, 1980). Richter-Anton (1986) concluded that the best predictor of an adult's likelihood of being a continuing learner is the prior level of educational achievement.

Richter-Anton (1986) reported that reentry students are more likely to be single. However, research also indicates that many reentry students are married with dependent children and have the time and interpersonal commitments associated with raising a family (Benshoff, 1991).

To a great degree, reentry students are commuters who live, work, and usually participate in leisure activities away from the campus. Some of them travel great distances to participate in higher education in order to avoid disrupting their families (Benshoff, 1991).

The personal situations of reentry students display features of typical adults (e.g., many hold down full-time jobs while attending school, usually in order to fulfill financial commitments beyond the cost of their education) (Benshoff, 1991). From their study of reentry students at Ohio State University, Blanshan, Burns, and Geib (1984) reported that most were employed as opposed to being unemployed. This point was made in the study by Richter-Anton (1986), who also found that the employment was likely to be full time. A high percentage are employed in professional and technical occupations, many of which are in business, and have incomes of at least $10,000 (Richter-Anton, 1986).

In spite of the need to remain in the work force, Blanshan, Burns, and Geib (1984) found a high percentage enrolled as full-time undergraduate

students. In an earlier study, Cross (1980) reported that adult learners tend to be achievement-oriented and relatively independent.

Early surveys of characteristics of reentry students indicated that many reentry female students discontinued their education to get married and have children and that their spouses were college graduates in professional occupations (Scott, 1980). Subsequent research has not been done that would verify whether or not these characteristics remain true.

While earlier studies (Sewall, 1984; Streeter, 1980) indicated a larger percentage of females over males in the reentry student population, men and women are now equally likely to return to school (Benshoff, 1991; Richter-Anton, 1986). Benshoff (1991, citing Brazziel, 1989) pointed out that most of the research on reentry students has focused on females who return to school. Besides those factors which are discussed in the following sections, including reasons for returning to postsecondary education, perceived barriers, needs of reentry female students, the research on female reentry students has focused mainly on developmental issues.

Terrell (1990) examined problems associated with returning to school for married reentry women from a developmental midlife perspective and identified seven developmental issues for adult reentry women. These include feeling guilty over being gone when children may have needs, paying a considerable amount of money for day care and worrying about its adequacy, believing that they as women bear much of the family responsibilities (even though the spouse may be helpful), making career compromises for the sake of their families, and sacrificing virtually all of their free time.

Terrell's work has some interesting contrasts with an earlier study by Kahnweiler & Johnson (1980) which also identified seven developmental

issues. As the result of interviews with 40 reentry women, ages 30 to 50, at Florida State University, they presented a midlife developmental profile of these features: introspective concerns, or examination of one's own mental process (ability to do academic work) and emotional state (anxiety about academic work); concerns about physical development and appearance, or remaining youthful and attractive; awareness of time limitations, or a changing perspective on time and sense of one's mortality; concerns about the role as mother (with children at home or recently having left); concerns about changes in the role as wife and differing needs (more or less) for emotional support from spouse; concerns about changes in role and relationship with aging parents, or increased dependency on the child by aging parents; and feelings of uniqueness, or feelings of isolation and separation.

Of interest in comparing Terrell's (1990) conclusions with those of the study a decade earlier is the fact that Terrell's results included concern about career compromises for family. Also, there was no concern mentioned about personal appearance or the feeling of isolation as there had been in the earlier study.

Contrasting male and female reentry students, Blanshan, Burns, and Geib (1984) found in their survey of reentry students at Ohio State University that (a) the men were closer in age than the women to traditional-age students, (b) females had a longer number of elapsed years than males before returning to school; (c) more females than males reported having children in the household.

Summary of Characteristics of Reentry Female Students

The literature on characteristics of female reentry students spans a decade and suggests that the variety of characteristics being observed is increasing. Some research (Blanshan, Burns, & Geib, 1984; Scott, 1980, Sewell, 1984; St. Pierre, 1989) focuses more on demographic characteristics, for example, that reentry students are at least 25 years old, likely to be female, married with children, some education beyond the high school years, and have full-time employment. Other research addresses characteristics such as reentry students' consumer orientation toward education; their greater sense of purpose (Richter-Anton, 1986); their concern about managing academic work and employment with family (Terrell, 1990); and their introspective concerns such as guilt, test related anxiety, and remaining youthful and attractive (Kahnweiler & Johnson, 1980).

Reasons for Returning to Postsecondary Education

What motivates adults to return to the classroom at a time when many of their contemporaries are focusing on family responsibilities, career, and retirement planning? The literature suggests that the reasons are many with no one common denominator. Research on the reasons why reentry students return to school includes studies on adults in general, and females in particular. Both types of studies are reviewed in this section.

Adult Student Population. Adults return to higher education for career-related reasons including preparation for new careers and advancement (Rawlins, 1979; Aslanian & Brickell, 1980; Martin, 1988); self-fulfillment reasons including the pursuit of lifetime goals and life-enrichment through the gaining of knowledge (Rawlins, 1979; Martin, 1988); changes in leisure patterns (Aslanian & Brickell, 1980); earning a degree (Martin, 1988);

increasing earning power (Martin, 1988); and family life transitions such as marriage, divorce, death, physical illness (Aslanian & Brickell, 1980).

The rising costs of higher education often have an impact on students, forcing them to work and accumulate resources before returning to complete their education (Aslanian & Brickell, 1980). In addition, some younger students lack the maturity or the motivation necessary to complete their education and thus drop out; they may then return as older, more motivated and more mature students to finish what they began as adolescents (Aslanian & Brickell, 1980). Increased job requirements or career changes may also force adults to seek additional education (Aslanian & Brickell, 1980). The upward progression of an educated population and work force and increased educational requirements for high-paying jobs may be the single most important factor in the continued influx of adult students (Brazziel, 1989). Henry (1985) found that the primary reasons for black females to return to school were self-fulfillment, career advancement, increased income, and social contact.

Blanshan, Burns, and Geib (1984) investigated the relationship between gender and reasons for returning to school. In a study of 210 male and female reentry students ages 25 or older, they found the most frequently reported reasons for returning to school to be personal enrichment, desire for a higher degree, preparation for a new career or job, enhancement of present career or job, and living within commuting distance. Returning to school to seek enrichment and to replace the loss from the home of grown children were more important for women than men. Also, more men than women were enrolled in academic programs because their employers wanted them to go to school and to test their ability to do college work. Both males and females

ranked as the primary reason for returning to school the preparation for a new career/job and the second most important reason for both genders was enhancement of present career/job.

Wilson (1990) found that for male reentry students between ages 30 and 50 the majority of reasons for returning to school related to personal fulfillment. Further examination of motivation for reentering school by gender revealed similar responses related to self-fulfillment; however, men placed more emphasis on work and status (e.g., "to make changes in my career") while women's responses related more to personal fulfillment (e.g., "something I always wanted to do").

Hu (1985) investigated the motivations and attitudes of current, prospective, and nonprospective reentry students. Current (i.e., actively taking courses) and prospective (i.e., likely to enroll within twelve months) reentry students were asked to identify the most important reason for attending school among eight items; nonprospective students were asked to select the most important reason for not attending. Most current students listed "career advancement" or "career change" as reasons why they returned to school. Prospective students indicated "for education sake" and "keeping up with new knowledge" to be important. Nonprospective students indicated "lack of time" as the most frequently reported reason for not taking classes.

Hu's study also asked respondents to evaluate a list of 29 attitudinal items which an adult would consider when selecting a college or university in which to enroll. Current students cited "excellent academic reputation," "easy to commute from work or home," "my family or friend recommended it," and "numerous course offerings" to be important. Prospective and nonprospective

students emphasized "required little homework after class," "recent favorable newspaper publicity," "informative university catalog," and "small classes."

Spanard (1990) cited three mental steps for a reentry student contemplating enrollment. First, the student develops a new, or acknowledges an existing, desire to return, thus formulating the intent or motivation. An example would be dissatisfaction with present employment. Second, the student determines whether the intent to resume college studies is strong enough to justify the displacement of time now in use for other activities. If the answer is "yes" in this step, the student reenters college. Third, the action that must occur for degree completion is the perseverance to stay with the program until the degree is earned. Spanard (1990) suggested that steps one and three are variable in length. For some students, the desire to return may evolve over several years and the perseverance to complete the degree may be erratic. The second step is more finite and requires less time because of the mere "yes" or "no" requirement than the development of the intent (step one) and the perseverance (step 3).

Morstain and Smart (1977) found that reentry students can be classified into distinct motivational types. Participants in their study completed the Education Participation Scale, an inventory of 48 possible reasons for participation in educational activities. The following motivational types of reentry students were identified: social relationships or need for personal associations; external expectation or fulfilling work requirements of an employer; social welfare or a general humanitarian concern; professional advancement or to advance in current occupation; escape/stimulation, or relief from boredom and responsibilities; cognitive interest or just for the sake of learning.

Sewell (1984), in a study of reentry male and female undergraduates, investigated whether specific situations or events (triggers) in an adult's life influence the return to school in addition to motivational reasons. Approximately one third of the respondents believed that job dissatisfaction, encouragement from family or friends, or the availability of funds were major triggers in their decision to return to school. With motivations for pursuing a degree, most adults indicated one or more of these reasons -- to develop a new career, simply to learn, to experience the satisfaction of having a degree, and to achieve independence and a sense of identity. Less than 1% of the respondents indicated social interests as a major reason for returning to school.

Reentry Females. The research available cites many reasons why women return to higher education. Astin (1976) found that many women reported boredom, stemming from such issues as grown children, husband's active social life, and marital and family problems, as reasons for returning to school. In a study of the Women Involved in New Goals Program at Queens College, Brandenburg (1974) found that women who had been out of school at least 15 years and were married with children, reported reasons such as self-improvement (e.g., "I'm feeling stagnant and want a meaningful career"), self-fulfillment (e.g., "I want to grow up and find my identity"), and better employment (e.g., "I seek financial independence, meaningful employment"). In a study of full-time female students age 30 years and older, Lamb-Porterfield, Jones, and McDaniel (1987) found that the most frequent reasons for returning to school were career change, job enhancement, and personal enrichment.

With graduate females in an M.S.W. program at the University of Pittsburgh, Sales, Shore, and Bolitho (1980) found that the strongest factor in the decision to `return to school was a woman's personal career needs, followed by a concern for future employability and a desire to do something meaningful. Clayton and Smith (1987) investigated whether reasons for returning to college could be grouped by motive type. In this study, 100 undergraduate reentry female students aged 25 and older completed a 70-item questionnaire of specific reasons for returning to college. A factor analysis revealed eight motive types: self-improvement (e.g., "It helps me overcome feelings of inferiority and raises my self-esteem"), self-actualization ("It is a good place to evaluate myself -- to discover the extent and limits of my capabilities"), vocational (e.g., "I will have a better chance of getting a job that is interesting and satisfying to me") role (e.g., "It is a legitimate way to avoid being absorbed in the demands of home and family responsibilities"), family (e.g., "I will be able to make a significant contribution to the family income"), social (e.g.," It is a good way to meet interesting men"), humanitarian (e.g., "I will be better prepared to use my abilities to the benefit of my fellow humans"), knowledge (e.g., "It is a way to get a better understanding of life and the world").

Summary of Research on Reasons for Attending. The research on reasons for attending postsecondary education has changed very little over the last decade. Earlier studies on reasons for attending school (Aslanian & Brickell, 1980; Blanshan, Burns, & Geib, 1984, Morstain & Smart, 1977; Rawlins, 1979) cite employment, economics, life transitions such as death and divorce, self fullfillment, and motivational type. Later studies (Lamb-Porterfield, Jones, & McDaniel, 1987; Martin, 1988; Wilson, 1990) list similar reasons, while a few

studies list reasons not mentioned in earlier research, such as the decision-making style of reentry students (Spanard, 1990) and the reasons of current and prospective reentry students (Hu, 1985).

The following salient points on reasons for returning to school were derived from the literature. Males and females, as a group, more frequently reported preparation for a new career, advancement in present career, economic reasons, family life transition (marriage, divorce, death), and self-fulfillment as reasons for returning to school. Reasons for returning to school may be grouped into specific motivational types, such as social and career. Men report returning to school for career- and job-related reasons whereas women report returning to school for personal fulfillment, but the most frequent reasons for returning to school are career- or job-related for both genders. The most frequent reasons women report returning to school are career-related, self-fulfillment, and reasons related to family such as economics.

Barriers to Reentry

According to the literature, there are barriers (or problems) associated with attending postsecondary education for reentry students. Research focuses on the following: (a) studies of adults, (b) studies on reentry females, (c) problems associated with returning to postsecondary education on reentry females from a developmental perspective, (d) classification of problems associated with attending postsecondary education into categories, (e) the relationship of certain variables (e.g., marital status) to problems associated with attending postsecondary education.

Adult Students. Rawlins (1979) in a descriptive study of undergraduate male and female students 30 years and older at the University of Nebraska-

Lincoln found that the most frequently reported problem by this group was concern about age. Responses regarding the concern about age translated into worries about relating to and rejection by younger students or feeling like an "old" person among younger students. Other concerns of these returning adults were study habits, financial problems, changes in family life, and the urgency to earn superior grades. Problems associated with returning to postsecondary education noted by Kimmel and Murphy (1976) included those found by Rawlins as well as class location and schedules, entrance examinations, tuition, prior academic record, balancing job, school and family responsibilities, and the institutional red tape associated with enrollment procedures. Similarly, Apps (1981) found that problems faced by returning adults included insecurity over the decision to return to school, self-doubts about the ability to succeed in the academic environment, family responsibilities, and work responsibilities.

Older established students of 30 to 50 years of age at the University of Tennessee were the focus of a study by Wilson (1990). In this study, male and female students were asked to rate on a five-point Likert scale the seriousness of these problems -- commuting distance, financial concerns, paper work for reentry, class schedules, rusty study skills, lack of confidence, self-consciousness about age, inappropriate assignments, lack of employer support, lack of family support, credit for experience, and delay of gratification. Unlike the results reported by Rawlins (1979), adults in this study did not perceive their age as a barrier to education, nor did they report lack of self-confidence or feeling out of place with traditional-age students in the classroom. Only four problems emerged as serious concerns: conflicting

class schedules, financial problems, rusty study skills, and for reasons of both finances and time constraints having to delay gratification.

In addition to studying the barriers perceived by single and married adults who return to postsecondary education, Flannery and Apps (1987) addressed whether the barriers which returning adult students experience at reentry changed in severity over time (i.e., one year later); and whether there was any relationship between the barriers adult students experienced and persistence in or withdrawal from school. Major barriers perceived by adults who had returned to school were an increase in stress, difficulty in parking in and around campus, the burdens of having to balance family and school time and, for those employed, having to balance job and school time. The same barriers perceived by adults in their first semester of school remained the same after one year; however, students had significantly more problems balancing family and school. Because only 3 of the 43 persons in the study withdrew from school, a relationship between perceived barriers and persistence/withdrawal could not be examined. The reasons given by the three students who withdrew related to occupying multiple roles; two cited birth of a child and one cited getting married.

Reentry Female Students. Scott (1980), in a review of descriptive studies from 1966 to 1979 on returning female students, found that reentry women have problems with anxiety, lack of confidence in their mental ability, and poor self-image or self-concept. They are apt to feel socially out of place with the younger students. Many have discontinuity in their educational patterns, due frequently to job transfers of spouse. Many have problems managing time and family responsibilities, which are complicated with issues of child care, spouse's commitments, family appointments, and children's illnesses.

Finances, feelings of guilt about not being at home, and lack of family support for educational pursuits also present difficulties.

Similarly, St. Pierre (1989) explored problems confronting female reentry students as synthesized from available research relative to this population. While many women overcome internal (psychological) barriers such as lack of self-confidence, many external (institutional) barriers such as standardized tests are more frustrating and restricting (St. Pierre, 1989). These institutional barriers occur sometimes in the form of confusing and unfamiliar reentry policies (e.g., application procedures, registration), policies and tests for admissions which may have a discriminatory effect on females with life experiences different from the norm, lack of child care facilities, and class schedules which are difficult to coordinate with other obligations. Rules affecting financial aid may be less favorable to female students (e.g., award programs that are only available to full-time students or educational loans based on spouse's income).

Smallwood (1980) identified problems similar to those cited by Scott (1980) of adult college women over 25 years of age. Smallwood's study addressed the question of whether credit hours, age range, marital status, and dependent children were related to the intensity of the problems associated with attending school. The five problems of most concern were coordinating child care and job responsibilities, academics, job/career acquisition, interpersonal relationships, and need for financial aid. Additional results of this study were as follows: (a) the number one concern to participants was coordinating studies with child care and family responsibilities; (b) coordinating child care with studies and family responsibilities was related to number of credit hours enrolled in the semester; (c) need for financial/legal

aid was related to credit hours enrolled, income, and marital status -- those with lower income and separated or divorced need financial aid; (d) age was related to certain problems - younger returning students were more concerned about child care while older students were more concerned about ability to succeed in college.

Classifications of Barriers Associated with Returning to Postsecondary Education. As early as 1972, Eckstrom (1972) examined women's participation in postsecondary education with the purpose of defining factors which might prevent them from participating in higher education. Eckstrom (1972) divided these problems or barriers into the following categories: (a) institutional, or how institutions respond to the needs of returning women students such as admissions/financial aid policies or class schedules; (b) situational, or role expectations imposed by the family and society which may affect academic performance and well being as a student and may include such factors as child care or transportation; and (c) dispositional barriers, or those psychological factors which may affect academic performance such as self-concept or self-esteem, self-confidence, anxiety, or assertiveness.

Using the Eckstrom categories, Barkhymer and Dorsett (1991) studied 40 graduate females ages 25 and older. Students were asked to respond to items using a Likert-type scale. Most participants were married with children and cited career and self-fulfillment as reasons for returning to school. In the situational category, the problem of greatest concern was financing the total cost of education. In the institutional category, the problems of greatest concern were scheduling conflicts between academic classes and job and home responsibilities and frustrating institutional red tape. In the dispositional

category, the problem of greatest concern was the pressure to make high grades.

Wheaton and Robinson (1983), using a different classification, cited internal or psychological barriers and external or institutional barriers to success for returning women students. Internal barriers were guilt and anxiety about placing their own needs above those of their family, lack of self-confidence, and lack of decision-making skills. External barriers were standardized tests required for admission, lack of financial aid (especially rules that make it difficult for part-time students to receive aid and that require spouse's income to be considered as part of the financial need picture), lack of child care, increased family demands on time, and the lack of available courses to fit a demanding work and home schedule.

Few studies address the degree to which variables such as age, gender, marital status, number of children, and employment status, affect the perception of problems associated with attending school. Lance, Lourie, and Mayo (1979) surveyed male and female reentry students ages 25 and older to assess problems associated with attending school by gender and length of academic interruption. Using information from previous studies, 18 difficulties were listed (similar to Barkhymer and Dorsett, 1991) on a questionnaire and each student was asked to check whether each difficulty was "applicable to me" or "not applicable to me." The most frequently reported difficulties reported by all students were not having enough time and experiencing difficulty in managing time. Other problems cited were obstructive admission procedures, fear of not being smart enough, fear of failing, lack of ability to study and learn, and fear of dulled memory. This study resulted in significant differences in expressed difficulties between men

and women. Women, more than men, expressed difficulty with children's issues, guilt for spending family money, fear of a dulled memory, lack of spouse support with reentry, and guilt over pursuing one's goal. Finally, reentry students who had long interruptions in education before reentry expressed more concern over academic-related difficulties than those reentry students with shorter interruptions. Thus, on the basis of this study, the length of school interruption appears to be related to the number of perceived academic difficulties with attending school.

Blanshan, Burns, and Geib (1984) investigated the relationship of gender and problems associated with returning to postsecondary education. For women, the top six problems were cost of education, general lack of time, time of day classes are offered, lack of time for household management, decrease in income, and sex discrimination. For men, the top six problems were cost of education, time of day classes are offered, general lack of time, decrease in income, conflict with concurrent education and job responsibilities, and lack of specific skills or abilities. Cost of education and issues with time were cited by members of both gender. Women reported time conflicts with education and household responsibilities, whereas men reported time conflicts, education, and job responsibilities.

Byrd (1990) investigated the extent to which the variables of age (25 and older), gender, marital status, number of children, employment status, income, and race affect perception of situational, institutional, and dispositional barriers. No differences were found in the perceptions of categories of problems associated with attending school due to age or the perceptions of categories of problems associated with attending postsecondary education due to gender. There were differences in the perceptions of categories of

problems associated with attending school due to race -- non-Whites perceived more situational barriers (child care, financial, transportation, etc.) than Whites. There were no differences in the perceptions of categories of problems associated with attending school due the combined effects (interaction) of age, gender, and race. Also, there were no differences in the perceptions of categories of problems associated with attending school due to marital status. However, there were differences in the perceptions of categories of problems associated with attending school due to number of children -- those with children report more problems associated with attending school. There were no differences in the perceptions of categories of problems associated with attending school due to income, but there were differences in the perceptions of categories of problems associated with attending school due to employment status -- those employed full time report more institutional problems.

Summary of Research on Barriers to Attending Postsecondary Education. The identified research from 1972 and 1991 on barriers to attending school consists of descriptive research on either reentry males and females (Apps, 1981; Kimmel & Murphy, 1976; Rawlins, 1979; Wilson, 1990) and females (Scott, 1980; Smallwood, 1980; St. Pierre, 1989). The studies are similar in that the barriers identified have not changed over the years. The later research adds a new dimension by addressing perceived persistence of these barriers (Flannery & Apps, 1987; St. Pierre, 1989; Wilson, 1990) suggesting that psychological barriers such as lack of self-confidence are perceived as less serious over time as opposed to institutional barriers such as class schedules, parking, and financial aid which, over time, increase in perceived severity.

In summary, several points may be made based on the literature concerning barriers associated with returning to postsecondary education. Barriers of reentry male and female returning students include the following: age, finances, conflicts of class schedules with work, and family, lack of family support, self-confidence as it relates to ability to do academic work, study skills, logistics such as parking, and institutional red tape (e.g., procedures for admissions). Problems associated with returning school may be situational or related to one's life circumstances (e.g., one's job), institutional or related to the practices and procedures of the institution (e.g., class schedules), and dispositional or related to one's attitude, beliefs, and values. Women report more problems associated with school and household responsibilities, family, and child care, and introspective concerns about self-confidence and lack of confidence in mental ability. Those women reporting concerns with child care, household responsibilities, and income perceive themselves as having more problems than their male counterparts.

Student Support Services

The literature on institutional responses addressing the needs of reentry students consists mainly of the following: (a) studies surveying reentry student preferences from undifferentiated groups, (b) two studies relating needs to specific variables (gender and age), and (c) studies surveying the needs of women.

Reentry Students. Most returning adults perceive themselves as having different needs from their younger colleagues in terms of their responsibilities of family, home, and work and their academic difficulties associated with a break in the learning process (Rawlins, 1979). Rawlins (1979) concluded that these differences, exhibited in a study of male and

female adults (30 years and older), may have administrative and program implications for the institution. For example, institutions serving or trying to serve older reentry students may consider making changes in the enrollment process by minimizing the amount of institutional red tape, designing special orientation sessions for adult learners and other programs such as support groups that provide adult students with opportunities to meet with other adult learners. Faculty and staff should be educated on the special needs of adult learners. A special office of adult services may be useful as a focal point, which may, in turn, promote development of other specialized services for older students such as counseling services (personal, vocational, and academic) tutorial services, and evening registration hours.

In a survey of adult students, Martin (1988) found that services needed by this population include separate registration and advising services, adequate parking, more evening, weekend, and summer course offerings, financial aid, housing for older students, communication networks and support services designed for adults such as seminars dealing with college adjustment, and personal counseling and advising for adults. Sewell (1984), in studying older adults' reasons for attending school, recommended that institutions provide counseling and assistance on possible career options, degree alternatives, cost and expense information, admissions requirements and procedures, and orientation to the polices of the college or university, particularly any degree requirements that must be met by all students.

Aslanian and Brickell (1980), in a national representative sample of 2,000 male and female adult students 25 years of age and older, found that the 10 services most wanted by adult learners related to logistical ease, financial assistance, and career. Those services classified as "most important" were

evening registration hours, mail-in/phone-in registration, adequate and convenient parking space, financial aid and adequate information about student loans, academic and career counseling. Those services labeled "least important" by students in the study were more related to easing one's situation in life; these included child care, health insurance, classes to improve basic skills, adult social clubs, and residence hall affiliation.

Spratt (1984) reviewed a study done by the American College Testing Program designed to identity institutional program needs of adults. In that study adults signified that they wished the institution to help them develop speaking ability, increase math skills and reading speed, improve study skills and test-taking skills, learn how to handle pressure and develop decision-making skills, identify personal strengths and abilities and learn about job opportunities. These findings suggest clear programming implications for student services offices on campuses.

Thon (1984) investigated which services chief student personnel officers perceived were more important for adult students and which of those services were being provided more frequently by the institution. Data for this research were collected from a stratified random sample of 500 chief student personnel administrators from four-year institutions. Results indicated that the most implemented services for adults were "counseling type" services such as career counseling, job placement, individual needs assessment, marriage counseling, peer support groups, and peer counselors. Services for assisting reentry students which were provided most frequently were financial aid, orientation programs, and child care. Some least implemented services included overnight housing, activities for families, representation in student government, and an office for coordinating adult services.

Gender and returning student needs were investigated by Blanshan, Burns, and Geib (1984) with male and female students ages 25 and over. With females, rankings for the six most important needs were as follows: (a) assistance from academic advisor, (b) assistance with educational and career planning, (c) job search assistance, (d) program on time management, (e) information about university services, (f) test anxiety workshop. With males, rankings for the five most important needs were as follows: (a) assistance from academic advisor, (b) assistance with educational and career planning, (c) job search assistance, (d) information about university services, (e) workshop to improve study skills, (f) program on time management.

Female Students. Scott (1980) exploring research and descriptive studies from 1966 to 1979, identified the following needs of returning women students: more flexible class hours and evening courses; an admissions process that would not require outdated transcripts and cumbersome procedures; meaningful orientation programs; financial aid rules that are fair to older and part-time students; limited child care facilities; academic and vocational counseling; and academic skills programs for studying, taking notes, writing papers and using the library for research.

Lamb-Porterfield, Jones, and McDaniel (1987) conducted a needs assessment of 104 full-time adult women age 30 years and older to determine the importance of several categories of needs including academic skills, personal development, faculty instruction, and institutional support services. Results indicated that students placed a greater emphasis on needs associated with faculty instruction and the development of academic success skills. Perceived needs for faculty instruction were that faculty develop a realistic view of adult students' responsibilities outside the classroom and take more

personal interest in them as adults. Needs regarding academic and personal skill development included programs for improving math skills, library usage, managing stress, and enhancing self-esteem. Institutional support services indicated as needs included financial aid information, career planning, college credit by testing, campus orientation, child care information, and evening and weekend classes.

Wheaton and Robinson (1983), in addition to finding the needs identified by Lamb-Porterfield, Jones, and McDaniel (1987), identified several other needs of reentry women: separate orientation programs for adult women students, low-cost child care available on the campus, and support groups for reentry women. Another comprehensive study by Wilson and Christian (1986) of adult females age 25 and over revealed these needs -- advising and counseling services for females, financial aid eligibility for part-time students, more evening and weekend classes, facilities for day care, more programs of study adaptable for part-time students, academic support of the faculty for returning students, and institutional recognition of the needs of this group.

Summary of Research on Student Support Services. Earlier research on student support services for males and females studied administrative responses such as reduced institutional red tape, special orientation sessions and program responses, including special orientation sessions, counseling services, support groups, and academic skills programs (Aslanian & Brickell, 1980; Blanshan, Burns, & Geib, 1984; Rawlins, 1979; Scott, 1980; Wheaton & Robinson, 1983). Some of the later research (Lamb-Porterfield, Jones, and McDaniel, 1987; Martin, 1988) mentions additional program needs, such as

older students' expressed need for better understanding by faculty and for seminars dealing with college adjustment for older adults.

A summary of the salient points in the literature on needs of reentry students includes the following: (a) needs reported by both males and females relate to administration of the college or university (e.g., institutional red tape with admissions, evening and weekend classes, financial aid, adequate parking, housing, registration, child care) and program administration (support groups, career and personal counseling, orientation, workshops on personal development, workshops on study skills); (b) younger students report more use of traditional services such as orientation, housing, and health while older students report more use of services related to academic and career counseling and programs on study skills; (c) both men and women report needs related to career and academic counseling and study skills; (d) women report needs related to child care and financial aid more than men.

Noninstitutional Variables Affecting Female Reentry Students

Although overt discrimination against women has received much attention among the obstacles to advancement in higher education, the dilemma of trying to combine marriage, family, work, and the student roles may be the more pervasive deterrent to achieving academic success.

Role Strain. Dublon (1983) in a study of reentry female doctoral students addressed these two questions related to multiple roles: What conflicts are anticipated with future role commitments to marriage, family, career? and what coping strategies will be used to resolve conflicts among marriage, family, and career responsibilities? Coping strategies were described as structural role redefinition, or the altering of all imposed expectations of others such as putting career ahead of family; personal role redefinition, or

changing another's expectations such as negotiating household responsibilities with spouse; and reactive role behavior, or accepting all expectations of others such as "being everything to everybody."

Respondents were equally divided between those who did and those who did not anticipate future conflicts when these roles (spouse, mother, career) occurred simultaneously. Those who did not anticipate conflict attributed this response to a supportive husband and/or family; those who did anticipate conflict attributed this conflict to time constraints and balancing multiple roles. With coping strategies, most women reported structural role redefinition as their strategy (i.e., by changing the expectations of another). These findings would suggest that the more education a woman attains, the more she may attempt to change the expectations held by others so that fewer conflicts will be perceived by them.

Van Meter and Agronow (1982) investigated whether any of the following variables would be correlated with an increase in role strain: choice of salient role other than family role, presence of young children, employment of married college women, satisfaction from academic accomplishments, emotional support from husband and family, husband's agreement with wife's role priorities, husband's educational level and income, wife's health, marital satisfaction. Results of this study indicated that higher levels of role strain were associated with reports of poor health, lack of emotional support from the family, and lower levels of marital satisfaction and that the husband's disagreement with the wife's role choice was associated with higher levels of role strain only when she chose to put a role other than the family first. A similar study by Kirk and Dorfman (1983) with 141 reentry females addressed sources (positive and negative) of role strain. Positive

sources included learning new things, more positive self-image, success achievement, and meeting new people; negative sources included not enough time, performing multiple roles, finances, tests and grades, and study skills.

Beutell and Greenhaus (1983) investigated the intensity of conflict and coping behavior of reentry women students with home and non-home roles. The time demands of the student role were found to be more intense for women whose husbands held relatively traditional sex-role attitudes than for women whose husbands held nontraditional attitudes. There seemed to be a positive relationship between conflict intensity and coping behavior for women with traditional sex-role attitudes. In other words, women with traditional sex-role attitudes used reactive role coping behaviors (meeting all the role sender's expectations) rather than structural role redefinition (mutual agreement on a new set of expectations).

Sales, Shore, and Bolitho (1980) examined, among other things, anticipated role problems by mothers who completed an M.S.W. program. Women who anticipated problems with managing household tasks, time for children, and personal time for self and leisure did experience such problems as a student. Berkove (1979) found that married reentry women received more support for college attendance from their husbands when the family and household roles were not altered during the wife's return to school.

Scott and King (1985) investigated the relationship of wife/family role behavior and spouse/husband support. In this research, wives who were compensating (balancing workloads with some delegation of household tasks) and overcompensating (maintaining previous level of commitment to the family needs) received more family support than wives who were noncompensating (placing greater emphasis on the school role and

neglecting household tasks and children). Also, the overcompensating wife was perceived as more considerate of the family than the compensating wife.

Multiple roles may not always result in emotional stress (Gerson, 1985). This research investigated potential positive and negative outcomes of multiple roles for a group of middle-aged married (or formerly married) reentry women who had returned to school at midlife with a group of housewives. Women in both groups had one or more children. Results in this research suggest that reentry women students, more than housewives, experience more role gratification (self-respect, more diversified life, more resources, more meaningful life, etc.) on the average, but encountered greater role strain (insufficient time, fatigue, others' expectations excessive) in contrast to housewives.

The relationship of sources of role conflict and gender was investigated by Gilbert, Manning, and Ponder (1980). In this research, male and female undergraduate (55%) and graduate students (45%) completed a questionnaire designed to address the following: (a) Do males and females identify different sources of role conflict? and (b) Does the degree of role conflict and perceived effectiveness differ with the source of role conflict? With sources of conflict, more women than men described beliefs about role demands (e.g., spouse, student) as the basis of their role conflict, whereas men reported more beliefs about self (e.g., comprehension ability) and interpersonal dissatisfaction (e.g., time to pursue outside friendships). With perceived effectiveness in dealing with role conflict, men and women did not differ, with both groups reporting average ratings with perceived effectiveness. Not one male in the study mentioned familial demands as a source of role conflict.

Emotional and Instrumental Support. Husband support may be in the "mind of the beholder." For example, support by a husband may mean that he does not actively oppose the wife's returning to school (Rice, 1982). Other husbands may interpret support as the giving of permission for the wife to assume additional responsibilities (Rice, 1982). Women, however, may define support in more behavioral rather than attitudinal terms (Rice, 1982). Accordingly, women may expect their spouses to assume more responsibility for household chores and child care.

A better understanding of the concept of spouse support is provided by Berkove (1979) who defines four aspects of husband support: attitudinal, emotional, financial, and behavioral. Attitudinal support was seen as the degree to which wives perceived their husbands as holding nontraditional attitudes regarding women's roles, responsibilities, and abilities (Berkove, 1979). Emotional support involved the wives' assessment of their husbands' approval and encouragement of educational endeavors (Berkove, 1979). Financial support was measured by the wives' assessment of the husbands' willingness to finance their education (Berkove, 1979). Behavioral support was based on the wives' assessment of the husbands' willingness to help with household tasks and child care responsibilities (Berkove, 1979). Berkove investigated these four aspects of husband/spouse support as perceived by a sample of married reentry women students. With attitudinal support, married reentry women reported that husbands held conservative attitudes (e.g., husbands regarded intellectual women as being less feminine). With emotional support, married reentry women reported strong emotional support from their husbands for returning to school. With financial support, married reentry women reported husbands' willingness to provide financial support

for their education; with behavioral support, married reentry women reported husbands as less willing to provide assistance with household tasks. Finally, women whose husbands held more liberal attitudes regarding women's roles experienced the least emotional stress in the home.

Huston-Hoberg and Strange (1986) examined whether married male and female adults enrolled in a two-year technical college degree program differed in the degree and kinds of spouse support. Kinds of spouse support included the following: attitudinal, emotional, and functional. Functional support is similar to the behavioral support reported by Berkove (1979). With attitudinal support, significant differences were observed between male and female respondents. Reentry women students reported greater attitudinal discrepancy with their spouses; they used such statements as these in reference to women's roles -- "A woman can be as intellectual as a man" and "It is all right for the woman to attend school as long as it doesn't disrupt the family routine." With emotional support, reentry men students reported a greater degree of emotional support from their spouses. With functional support, reentry women students reported assuming greater household responsibility than their spouses. Overall, wives were more supportive of their husbands' return to formal education than husbands of their wives' return (Huston-Hoberg & Strange, 1986).

Similar results on male and female reentry students have been reported by DeGroot (1980). That study found that married male reentry students report receiving more spouse support than female reentry students. Furthermore, wives of male reentry students report giving more spouse support than husbands of female reentry students. An additional finding reported by DeGroot (1980) related to the level of husband support and extent of college

participation and assertiveness of the reentry woman student. It appears that college participation helps female students become more assertive; the more assertive they become, the more they expect and receive spouse support.

Rice (1979) investigated the following relationships: (a) sex role orientation (i.e., traditional versus nontraditional sex role orientation) and spouse emotional and instrumental support (i.e., household chores such as cleaning, child care, etc.) and (b) self-esteem and spouse emotional and instrumental support. Among those women who have returned to school, those who reported nontraditional sex role orientation also reported greater emotional and instrumental support from spouses than those women who reported traditional sex role orientation. Level of self-esteem was not significantly related to perceived degree of emotional and instrumental support.

Suitor (1987) investigated the effect of husbands' educational attainment on their attitudes towards wives' enrollment in college and on willingness to provide instrumental support. Results in this study indicated a positive relationship between husbands' educational attainment and attitude towards wives' enrollment in college and a negative relationship between husbands' educational attainment and husbands' willingness to provide instrumental support. With the former, well-educated husbands expressed positive attitudes about their wives' enrollment; husbands with little or no college expressed negative or ambivalent feelings. Husbands who had completed college were less willing to provide instrumental support than those husbands who had not completed college. Husbands who had completed college reported more anxiety about the future of the marriage; husbands who had not

completed college viewed theirs wives' enrollment as a means to increase the financial security of the family.

Summary of Research on Noninstitutional Variables of Female Reentry Students. Regarding role strain the research reports that (a) reentry females use different coping strategies with multiple role strain which range from altering the expectations of another (structural role redefinition), to negotiating roles (personal role re-definition), to accepting all expectations of others (reactive role behavior); (b) reentry females experience higher levels of role strain with lack of emotional support from the family, marital satisfaction, and husband's agreement with wife's role priorities; (c) reentry females experience lower levels of role strain with academic achievement, positive self-image, and meeting new people; (d) the intensity of role conflict for reentry females is related to whether husbands who hold traditional or nontraditional attitudes about women; (e) reentry females received more support from spouses when they do not alter their roles upon returning to school; and (f) sources for role conflict differ for men and women -- for women, sources of role conflict are related to beliefs about role demands of spouse, student, and mother; for men, sources of role conflict are related to beliefs about self and interpersonal dissatisfaction.

Regarding emotional and instrumental support, the research reports that (a) spouse support may be defined as attitudinal (traditional or nontraditional), emotional (approval and encouragement), instrumental (help with household tasks), and financial (monetary support for school); (b) reentry females report spouses are more willing to provide attitudinal, emotional, and financial support and less willing to provide instrumental support; (c) reentry males and females report perceived differences with

types of spouse support -- men report receiving more emotional and instrumental support from their spouses; (d) reentry women report a positive relationship with spouse's educational attainment and emotional support and a negative relationship between spouses' educational attainment and instrumental support.

Focus of Research and Conclusion

An extensive body of literature is available on female reentry students that includes demographics and features, reasons for attending school, barriers associated with attending school, support services from the institution, role strain, and emotional and instrumental support. Much of this research examined reasons for attending and problems associated with attending college by surveying reentry males and females as an undifferentiated group (Rawlins, 1979; Aslanian & Brickell, 1980; Martin, 1988; Thon, 1984). Other research provides systematic comparisons with traditional-age college students (Jones, 1990; Pirnot & Dunn, 1983; Kasworm, 1980; Kuh & Ardaiolo, 1979). Little research exists, however, that assessed the effects of age as a variable (Wolfgang & Dowling, 1981; Badenhoop & Johanson, 1980; Lance, Lourie, & Mayo, 1979; Blanshan, Burns, & Geib, 1984). To examine the importance of age as a variable affecting female students, this research treated age as a continuous variable and investigated its effect on reasons for attending college, perceived barriers to attending college, need for student support services, need for emotional support, sources of role strain, and need for instrumental support.

CHAPTER III

METHODOLOGY

The literature in Chapter II justifies the conclusion that there is extensive research on reasons for reentry females to attend postsecondary education, the barriers they have in doing so, and their needs in terms of services from the postsecondary institution. To some extent research is available on the emotional support needs of reentry females, sources of role strain, and instrumental support. Yet research is needed to examine the importance of age as a factor with undergraduate females as it affects their schooling.

This chapter provides a description of the methods used in this study which investigated the extent to which age of female college students accounts for explained variances in reasons for returning to school, barriers associated with attending school, needs for various types of student support services, needs for emotional support from others, sources of role strain, and instrumental support. Topics addressed in this chapter include the hypotheses, participants, description of the instrument used to collect data, results of the factor analysis of the instrument used in the study, and description of the statistical procedures used to analyze the data.

Hypotheses

The hypotheses tested are as follows:

1. Perceived reasons for attending university will vary significantly with female students of different ages.

2. Perceived barriers with attending university will vary significantly with female students of different ages.
3. Perceived needs for student support services will vary significantly with female students of different ages.
4. Perceived degrees of emotional support will vary significantly with female students of different ages.
5. Perceived sources of role strain will vary significantly with female students of different ages.
6. Perceived degrees of instrumental support will vary significantly with female students of different ages.

Participants

Participants for this study were a random stratified sample of undergraduate female students at The University of North Carolina at Greensboro (UNCG). Dr. Diane L. Cooper, Assistant to the Vice Chancellor, Division of Student Affairs, UNCG, assisted the researcher in obtaining a list of eligible participants for this study from the Office of Institutional Research. A stratified random sample of four age groups based on an adaptation of Levinson's (1978) age-linked developmental theory were formed. The following age groups and "titles" formed the stratifications: 17 to 21 (Leaving the Family), 22 to 33 (Entering the Adult World and Age 30 Transition), 33 to 40 (Settling Down and Midlife), and 41 to 50 (entering Middle Adulthood). The four age groupings were formed in order to ensure that a sufficient number of participants at all age levels would be represented and to ensure that age, the independent variable, would be treated as a continuous variable. Finally, to ensure that a sufficient number of respondents were included in each age group, a minimum number of 35 participants was

determined to satisfy the requirements of the sample and the test statistic.

The following demographic information was asked of participants: (a) age, (b) current marital status (i.e., single-never married, married, reside with significant other, separated or divorced, widowed), stage in program (i.e., undergraduate - first year, undergraduate - second year, undergraduate - third year, undergraduate - fourth year, other), (c) parental status (i.e., no children, parent with dependent children, adult children not dependent on the parent), type of child care (i.e., none, private day care, pay a baby sitter, friends or relatives, spouse/significant other), and current work status (i.e., not currently employed, employed as a full-time homemaker, employed full-time outside the home, employed part-time outside the home, other). Participants were not required to identify themselves unless they wished to receive a copy of the results.

Descriptive information concerning the participants is reported in Table 1. Of the 332 females who participated in the study, 26.2% were in the 17 to 21 age group, 32.5% were in the 22 to 33 age group, 22.3% were in the 33 to 40 age group, and 19% percent were in 41 and over age group. Most participants were either single (50.0%) or married (34.0%) with small percentage spreads among separated or divorced (12.7%), residing with a significant other (1.8%), and widowed (1.5%). Full-time undergraduate female students represented 58.5% of the participants while 41.5% were part-time. For stage (or year) in academic program, 17.2% were undergraduate-first year students, 16.6% were undergraduate-second year students, 22.9% were undergraduate-third year students, and 28.0% were undergraduate in their fourth year. A small percentage (14.6%) indicated "other" with information

such as "working on my degree but in my fifth year" and "working on a second undergraduate degree."

With parental status, a majority of participants (65.1%) reported having no children and smaller percentages (27.5% and 7.4%) for "parent with dependent children" and "adult children not dependent on me." Most participants (84.7%) with children reported no assistance with child care with smaller percentages among the following: private day care (2.3%), paying a baby sitter (2.3%), friends or relatives (3.8%), spouse or significant other (3.4%), and other (3.4%). A small percentage (26.8%) of participants were not employed while attending school. Most participants indicated full-time (25.3%) and part-time (33.1%) employment outside the home with a small percentage (6.9%) employed as full-time homemakers.

Table 1.

Description of Female Undergraduate Participants

Characteristic	Frequency	Percent
Age in years		
17 to 21	87	26.2
22 to 32	108	32.5
33 to 40	74	22.3
41 and over	63	19.0
Marital Status		
Single, never married	166	50.0
Married	113	34.0
Reside with significant other	6	1.8
Separated or divorced	42	12.7
Widowed	5	1.5

(table continues)

Table 1, continued

Description of Female Undergraduate Participants

Characteristic	Frequency	Percent
Student Status		
Full-time	193	58.5
Part-time	137	41.5
Stage in Academic Program		
Undergraduate - first year	57	17.3
Undergraduate - second year	55	16.7
Undergraduate - third year	76	23.1
Undergraduate - fourth year	93	28.3
Other (please specify)	48	14.6
Parental Status		
No children	211	65.1
Parent with dependent children	89	27.5
Adult children not dependent on me	24	7.4
Type of Child Care Currently Using		
None	221	84.8
Private day care	6	2.3
Pay a baby sitter	6	2.3
Friends or relatives	10	3.8
Spouse/significant other	9	3.4
Other (please specify)	9	3.4
Current Work Status		
Not currently employed	89	26.8
Employed as a full-time homemaker	23	6.9
Employed full-time outside the home	84	25.3
Employed part-time outside the home	110	33.1
Other (please specify)	19	5.7
Missing	7	2.1

Instrumentation

An established instrument did not exist to measure the variables considered significant in the literature on female college students'

perceptions of "being a student" as those perceptions may be affected by age. Therefore, an important part of this research project was the development of the instrument used in this investigation.

The survey instrument for this study was developed on the basis of the literature. A review of the literature relating to female students resulted in the 176 items in the survey that comprise the six variables (reasons for attending, barriers to attending, support services, emotional support, role strain, instrumental support) used in this study. All items identified in the literature were included in the survey and represent the variables affecting female students. A complete list of items and supporting references are provided in Appendix A. To assess readability and understanding of the items, three adult females (two female students and one woman in a professional occupation) read the survey and responded to the items. All reported no difficulty in understanding instructions on the survey and completing the items. Using Fry's (1977) Readability Graph (based on word syllable count and sentence length per 100-word sample), it was determined that the survey instrument required a tenth-grade reading level.

The survey instrument (see Appendix B) consisted of a page requesting demographic information and six pages containing 176 items associated with the following literature groupings variables: (a) Reasons for Attending (RA) - 24 items, (b) Perceived Barriers Associated with Attending (PB) - 45 items, (c) Support Services (SS) - 58 items, (d) Emotional Support (ES) - 10 items, (e) Role Strain (RS) - 26 items, and (f) Instrumental Support (IS) - 13 items. Participants responded to the items using a Likert scale from strongly disagree - 1 point, disagree - 2 points, neither agree nor disagree - 3 points, agree - 4 points, strongly agree - 5 points, does not apply - 0 points.

Factor Analysis of the Instrument

All 176 items on the instrument were intended to measure one of the six dependent variables: Reasons for Attending (RA), Perceived Barriers (PB), Support Services (SS), Emotional Support (ES), Role Strain (RS), and Instrumental Support (IS). A series of confirmatory factor analyses (CFA) were performed to examine the underlying factors of the instrument.

For the first CFA, all 176 items that composed the instrument were submitted to a principle components factor analysis. The number of factors to be extracted was set at six (corresponding to the number subscales on the instrument) and a varimax rotation was specified to maintain uncorrelated factors and achieve simple structure. The rotated factor pattern matrix from this CFA shows a majority of the items that composed each scale loading highly on separate distinct factors (Appendix C) with one exception (the items that comprised the Reasons for Attending scale distributed themselves among two or more
of the factors).

For the second CFA, the items that composed each scale were isolated and submitted separately to a principal components factor analysis. For each of these factor analyses, a minimum eigenvalue of 1.0 was established as the criterion for factor extraction and a varimax rotation was performed to maintain orthogonal factors and achieve simple structure. Tables 3 through 8 summarize these results. Only factor loadings greater than .2999 are shown for easier referencing.

Eight factors underlie the Reasons for Attending scale and are summarized in Table 2. Items in this scale concerning employment, financial status, family, and self-fulfillment appeared to be a complex mixture of several

factors not easily interpreted. The eight factors accounted for 64% of the variance in the Reasons for Attending scale.

Table 2.

Reasons for Attending (RA) Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor							
	1	2	3	4	5	6	7	8
RA1	.00	.00	.00	.00	.00	.00	.00	**.78**
RA2	.00	**.46**	.00	.00	.00	**.46**	.00	.00
RA3	.00	.00	.00	.00	.00	.00	**.68**	.00
RA4	.00	.00	.00	.00	.00	.00	.00	**-.59**
RA5	.00	**.69**	.00	.00	.00	.00	.00	.00
RA6	.00	**.75**	.00	.00	.00	.00	.00	.00
RA7	.00	.00	.00	.00	.00	**.66**	.00	.00
RA8	.00	**.46**	.00	.00	.00	.00	**.39**	.00
RA9	.00	**.63**	.00	.00	.00	.00	.00	.00
RA10	.00	**.57**	.00	.00	.00	.00	.00	**.58**
RA11	.00	.00	.00	.00	**.33**	.00	**.62**	.00
RA12	.00	.00	.00	.00	**.73**	.00	.00	.00
RA13	.00	.00	.00	.00	**.76**	.00	.00	.00
RA14	.00	.00	.00	.00	**.56**	.00	.00	**.36**
RA15	.00	.00	.00	.00	.00	.79	.00	.00
RA16	.00	.00	.00	**.91**	.00	.00	.00	.00
RA17	.00	.00	.00	**.90**	.00	.00	.00	.00
RA18	**.47**	.00	.00	.00	.00	.00	.00	**-.35**
RA19	**.51**	.00	**.45**	.00	.00	.00	.00	.00
RA20	**.42**	.00	.00	.00	.00	.00	.00	**.69**
RA21	**.76**	.00	.00	.00	.00	.00	.00	.00
RA22	**.70**	.00	.00	.00	.00	.00	.00	.00
RA23	.00	.00	**.85**	.00	.00	.00	.00	.00
RA24	.00	.00	**.77**	.00	.00	.00	.00	.00
	Variance Explained by Each Factor							
Factor	2.32	2.23	1.93	1.90	1.86	1.71	1.68	1.63
	9.68%	9.32%	8.06%	7.94%	7.73%	7.19%	7.02%	6.80%

Note: Only factor loadings greater than .2999 are reported bold face type.

Twelve factors underlie the Barriers to Attending scale and are summarized in Table 3. Items relating to financial concerns loaded on a single factor. Items relating to family concerns, self-confidence, and academic

concerns loaded on two factors. The twelve factors accounted for 52% of the variance in Perceived Barriers. Similarly, fourteen factors were extracted from the Support Services subscale as indicated in Table 4, and again, were not easily interpreted. Items concerning workshops on personal development, flexibility in admission requirements, and course offerings loaded on a single factor. Items concerning administrative services (e.g., phone-in registration, weekend bookstore hours) each loaded on two factors. The fourteen factors accounted for 67% of the variance in SS.

Table 3

Perceived Barriers (PB) Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
PB1	.00	.00	.00	.00	**.71**	.00	.00	.00	.00	.00	.00	.00
PB2	.00	.00	.00	.00	**.35**	.00	.00	.00	.00	.00	**.60**	.00
PB3	.00	.00	.00	.00	**.69**	.00	.00	.00	.00	.00	.00	.00
PB4	.00	.00	.00	.00	**.74**	.00	.00	.00	.00	.00	.00	.00
PB5	.00	.00	.00	**.37**	.00	.00	.00	.00	.00	.00	.00	.00
PB6	.00	.00	.00	.00	.00	.00	.00	**.67**	.00	.00	.00	.00
PB7	.00	**.41**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB8	.00	**.64**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB9	.00	.00	**.86**	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB10	**.54**	.00	**.44**	.00	.00	.00	.00	**.44**	.00	.00	.00	.00
PB11	.00	.00	**.87**	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB12	.00	**69**	.00	**.37**	.00	.00	.00	**.32**	.00	.00	.00	.00
PB13	**.78**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB14	**.46**	.00	.00	**.58**	.00	.00	.00	.00	.00	.00	.00	.00
PB15	.00	.00	.00	**.73**	.00	.00	.00	.00	.00	.00	.00	.00
PB16	.00	.00	.00	.00	.00	**.80**	.00	.00	.00	.00	.00	.00
PB17	.00	.00	.00	.00	.00	.00	**.78**	.00	.00	.00	.00	.00
PB18	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.72**	.00	.00
PB19	**.67**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB20	**.47**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.61**
PB21	.00	.00	.00	.00	**.34**	**.39**	.00	.00	.00	.00	.00	.00
PB22	**.32**	.00	.00	.00	.00	**.77**	.00	.00	.00	.00	.00	.00
PB23	**.62**	.00	.00	.00	.00	**.34**	.00	.00	.00	.00	.00	.00
PB24	.00	.00	**.75**	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB25	.00	.00	.00	.00	.00	**.66**	.00	.00	.00	.00	.00	.00

(table continues)

Table 3, continued

Perceived Barriers (PB) Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
PB26	.00	.00	.00	.00	.00	**.75**	.00	.00	.00	.00	.00	.00
PB27	**.71**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB28	.00	**.54**	.00	**.52**	.00	.00	.00	.00	.00	.00	.00	.00
PB29	**.71**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB30	.00	.00	.00	**.56**	**.37**	.00	.00	.00	.00	.00	.00	.00
PB31	.00	.00	.00	**.55**	.00	.00	.00	.00	.00	.00	.00	.00
PB32	.00	.37	.00	**.48**	.00	.00	.00	.00	.00	.00	.00	.00
PB33	.00	.00	.00	.00	.00	.00	**.36**	**.36**	.00	.00	.00	.00
PB34	**.55**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB35	.00	.00	.00	.00	**.32**	.00	.00	.00	.00	.00	**-.51**	.00
PB36	.00	.00	.00	.00	.00	.00	**.41**	.00	.00	.00	.00	.00
PB37	**.73**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB38	.00	.00	.00	.00	.00	.00	**.39**	.00	**.44**	.00	.00	.00
PB39	.00	.00	**.34**	.00	.00	.00	.00	.00	.00	**.51**	**.35**	.00
PB40	.00	.78	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
PB41	.00	.00	.00	.00	.00	.00	.00	.00	.50	.00	**-.32**	.00
PB42	.00	.00	.00	.00	.00	.00	.00	.00.	.00	.00	**-.48**	.00
PB43	.00	**.32**	.00	.00	.00	.00	.00	.00	**.73**	.00	.00	.00
PB44	.00	.00	.00	.00	.00	.00	.00	**.73**	.00	.00	.00	.00
PB45	.00	**.75**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Variance Explained by Each Factor											
	4.37	3.75	2.94	2.72	2.36	2.27	2.25	2.23	1.36	1.34	1.23	1.20
	9.71%	8.33%	6.54%	6.06%	5.25%	5.05%	5.01%	4.95%	3.01%	2.98%	2.73%	2.67%

Note: Only factor loadings greater than .2999 are reported in bold face type.

Table 5.

Support Services (SS)-Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
SS1	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.35**	.00	.00	**.63**	.00
SS2	.00	.00	.00	.00	**.35**	.00	.00	.00	.00	**.78**	.00	.00	.00	.00
SS3	.00	.00	.00	.00	.00	.00	.00	.00	**.58**	.00	.00	.00	.00	.00
SS4	.00	.33	.00	.00	.00	.00	.00	**.35**	.00	.00	.00	.00	.00	.00
SS5	.00	.00	.00	.00	.00	.73	.00	.00	.00	.00	.00	.00	.00	.00
SS6	.00	.00	**.31**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.68**
SS7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.71**
SS8	.00	.00	.00	**.69**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS9	.00	.00	.00	**.91**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS10	.00	.00	.00	**.90**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS11	.00	.00	.00	.00	.00	.00	**.49**	.00	.00	.00	.00	.00	.00	.00
SS12	**.33**	.00	.00	.00	.00	.00	.00	**.63**	.00	.00	.00	.00	.00	.00
SS13	.00	.00	.00	.00	**.34**	.00	.00	**.48**	.00	**.39**	.00	.00	.00	.00
SS14	.00	.00	**.68**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS15	.00	.00	**.79**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS16	.00	.00	**.73**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS17	.00	.00	.00	.00	**.43**	**.34**	**.35**	.00	.00	.00	.00	.00	.00	.00
SS18	.00	.00	.00	.00.	**.71**	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS19	.00	.00	.00	.00	.00	**.40**	**.50**	**.34**	.00	.00	.00	.00	.00	.00
SS20	.00	.00	.00	.00	.00	.00	**.82**	.00	.00	.00	.00	.00	.00	.00
SS21	.00	.00	.00	.00	.00	.00	**.66**	.00	.00	.00	.00	.00	.00	.00
SS22	.00	**.31**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS23	.00	.00	.00	.00	.00	**.57**	.00	.00	.00	.00	.00	.00	.00	.00

(table continues)

Note: Only factor loadings greater than .2999 are reported.

Table 5, continued

Support Services (SS)-Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
SS24	.00	.00	.00	**.33**	.00	.00	.00	.00	.00	.00	.00	.	.70	.
SS25	**.31**	**.61**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS26	**.44**	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.71**	.00	.00	.00
SS27	**.40**	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.72**	.00	.00	.00
SS28	.00	**.81**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS29	**.78**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS30	.00	**.84**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS31	**.59**	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.36**	.00	.00	.00
SS32	**.63**	**.32**	.00	.00	.00	.00	.00	**.34**	.00	.00	.00	.00	.00	.00
SS33	.00	.00	.00	**.65**	.00	.00	.00.	**.31**	.00	.00	.00	.00	.00	.00
SS34	.00	.00	**.31**	.00	.00	.00	.00	.00	**.72**	.00	.00	.00	.00	.00
SS35	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.80**	.00	.00	.00	.00
SS36	**.45**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS37	**.57**	.00	.00	.00	.00	.00	**.45**	.00	.00	.00	.00	.00	.00	.00
SS38	**.76**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS39	**.71**	.00	.00	.00	.00	.00	.00	.00	.00	.00.	.00	.00	.00	.00
SS40	**.51**	.00	.00	.00	.00	**.43**	.00	.00	.00	.00.	.00	.00	.00	.00
SS41	**.46**	.00	.00	.00	.00	.00	.00	**-.30**	.00	.00.	.00	.00	.00	.00
SS42	**.64**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS43	**.70**	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS44	.68	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS45	.41	.00	.00	.00	.00	.00	.00	.00	**.31**	.00	.00	.00	**.51**	.00
SS46	.39	.00	.00	.00	.00	**.68**	.00	.00	.00	.00	.00	.00	.00	.00
SS47	.48	.00	.00	.00	**.30**	.00	.00	.00	.00	.00	.00	**.48**	.00	.00
SS48	.00	.00	.00	.00	**.50**	.00	.00	.00	.00	.00	.00	.00	**-.33**	.00
SS49	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.81**	.00	.00

(table continues)

Note: Only factor loadings greater than .2999 are reported in bold face type.

Table 5, continued

Support Services (SS)-Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
SS50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	**.64**	.00	.00	.00
SS51	.00	.00	**.61**	.00	.00	.00	.00	**-.41**	.00	.00	.00.	.00	.00	.00
SS52	.00	.00	**.70**	.00	.00	.00	.00	**-.36**	.00	.00	.00	.00	.00	.00
SS53	.00	.00	**.33**	.00	**.41**	.00	.00	.00	.00	.00	**.35**	.00	.00	.00
SS54	.00	.00	.00	.00	**.76**	.00	.00	.00	.00	.00	.00.	.00	.00	.00
SS55	.00	.00	.00	.00	**.68**	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS56	.00	.00	.00	.00	**.75**	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS57	.00	.00	.00	.00	**.56**	.00	.00	.00	.00	.00	.00	.00	.00	.00
SS58	.00	**.64**	.00	.00	**.38**	.00	.00	.00	.00	.00	.00	.00	.00	.00
	Variance Explained by Each Factor													
Factor	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	6.07	3.73	3.47	3.40	3.39	2.79	2.73	2.23	2.01	1.95	1.88	1.80	1.77	1.71
	10.07%	6.44%	5.99%	5.86%	5.85%	4.81%	4.71%	3.85%	3.47%	3.36%	3.25%	3.10%	3.05%	2.96%

Note: Only factor loadings greater than .2999 are reported.

Four factors underlie the Emotional Support scale and are summarized in Table 5. An examination of Table 5 indicates that six of the 10 questions that composed this subscale loaded on a separate factor. These six questions concerned emotional support from family members, emotional support from employer and employees, and emotional support from faculty. The four factors accounted for 68% of the variance in Emotional Support.

Table 5.

Emotional Support (ES) Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor			
	1	2	3	4
ES1	**-.48**	.00	.00	**.78**
ES2	**.80**	.00	.00	**.59**
ES3	**.84**	.00	.00	.00
ES4	**.51**	.00	.00	.00
ES5	**.52**	.00	**.49**	.00
ES6	.00	**.95**	.00	.00
ES7	.00	**.96**	.00	.00
ES8	.00	.00	.00	.00
ES9	.00	.00	**.78**	.00
ES10	.00	.00	**.85**	.00
	Variance Explained by Each Factor			
Factor	1	2	3	4
	4.37	3.75	2.94	2.72
	21.38%	19.17%	16.59%	11.68%

Note: Only factor loadings greater than .2999 are reported in bold face type.

Five factors underlie the Role Strain scale and are summarized in Table 6. Item clusters concerning self-imposed demands, such as emotional tension or stress and expectations of others; marital demands and satisfaction; family responsibilities; and child care, for the most part loaded on one factor. The five factors accounted for 63% of the variance in RS.

Table 6.

Role Strain (RS) Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor				
	1	2	3	4	5
RS1	.00	**.70**	.00	.00	.00
RS2	.00	**.50**	**.36**	.00	.00
RS3	**.61**	.00	.00	.00	.00
RS4	**.64**	.00	.00	.00	.00
RS5	.00	**.73**	.00	.00	.00
RS6	.00	**.66**	.00	.00	.00
RS7	**.50**	**.60**	.00	.00	.00
RS8	**.52**	**.53**	.00	.00	.00
RS9	**.65**	.00	.00	.00	.00
RS10	**.71**	.00	.00	.00	.00
RS11	**.73**	.00	.00	.00	.00
RS12	**.72**	.00	.00	.00	.00
RS13	.00	**.54**	.00	.00	**.30**
RS14	.00	.00	.00	.00	**.68**
RS15	**.33**	.00	.00	.00	**.51**
RS16	.00	.00	.00	**.83**	.00
RS17	.00	.00	.00	**.84**	.00
RS18	.00	.00	.00	**.88**	.00
RS19	.00	.00	**.55**	**.52**	.00
RS20	.00	.00	**.93**	.00	.00
RS21	.00	.00	**.93**	.00	.00
RS22	.00	.00	**.84**	.00	.00
RS23	.00	**.43**	**.54**	.00	.00
RS24	.00	.00	.00	.00	**.74**
RS25	.00	**.55**	.00	.00	.00
RS26	.00	.00	.00	.00	.82
	Variance Explained by Each Factor				
Factor	1	2	3	4	5
	3.86	3.55	3.53	2.69	2.50
	14.84%	13.66%	13.60%	10.36%	9.57%

Note: Only factor loadings greater than .2999 are reported in bold face type.

Finally, for the factor Instrumental Support, 11 items loaded on one factor and two items loaded on factor two as indicated in Table 7. Items loading on the first factor concerned perceived degree of instrumental support with

household chores (e.g., preparing meals, house cleaning), while the two questions that loaded on two factors related to child care. The two factors accounted for 76% of the variance in IS.

Table 7

Instrumental Support (IS) Factor Analysis with Verimax Rotation

Questions	Factor Loadings by Factor	
	1	2
IS1	**.88**	.00
IS2	**.87**	.00
IS3	**.89**	.00
IS4	**.87**	.00
IS5	**.85**	.00
IS6	.00	**.95**
IS7	**.76**	.00
IS8	**.58**	**.42**
IS9	**.83**	.00
IS10	**.76**	.00
IS11	**.84**	.00
IS12	**.71**	.00
IS13	.00	**.95**
	Variance Explained by Each Factor	
Factor	1	2
	7.31	2.52
	56.23%	19.38%

Note: Only factor loadings greater than .2999 are reported in bold face type.

Summary of Factor Analysis

A single factor did not underlie any of the inter-item correlation structures for any subscale. Items that were similar within a scale clustered either on a single factor or two factors. For the Reasons for Attending subscale, none of the items formed interpretable clusters under a single factor. The 24 items that comprise this subscale list different reasons (e.g., financial, employment, family) associated with attending school. The results

of this scale suggest that no single variable can explain the reasons associated with attending school.

For the Perceived Barriers, Support Services, Emotional Support and Role Strain subscales, though several factors comprised each of the scales, items that were similar clustered either on a single or two factors. Items relating to family concerns and academic concerns clustered on separate factors on the Perceived Barriers; items relating to workshops and administrative services clustered on separate factors on the Support Services scale. Similarly, on the Emotional Support and Role Strain subscales several meaningful item clusters were interpretable on separate factors. The number of item clusters within each of these scales suggest that a fewer number of variables comprise these scales. Finally, for the Instrumental Support scale, with the exception of two items comprising this subscale, a single factor was found to underlie the inter-item correlation structure.

Procedures

The Office of Institutional Research, UNCG, provided the researcher with a stratified random sample of undergraduate females enrolled in the Fall Semester, 1993. Two random samples of 500 were obtained from age groups 17 to 21 and 22 to 32. Randomized sampling was not performed for age groups 33 to 40 and 41 and over as these groups numbered 201 and 151 respectively. A total of 1,352 participants were mailed a letter (Appendix D) describing the purpose of the study and requesting their participation, along with a guaranteed-postage postcard (Appendix E) to be returned by which they indicated willingness (or lack of willingness) to participate in the study by completing the survey. The population of the study was determined by the student's willingness to participate in the study. Each participant who

returned a postcard indicating willingness to participate was mailed a letter (Appendix F) expressing thanks for participation and enclosing a survey with guaranteed-postage return envelope. Only 25 people returned postcards indicating that they were not interested in participating in the study.

Table 8 summarizes the results of the initial mailing requesting participation in the study. The return rate on the postcards was lower for the two younger age groups. Age group 17 to 21 had a return rate of 22.2%; age group 22 to 33 had a return rate of 31.8%. The return rate was higher (44.8%) for age group 34 to 40 and highest (49.0) for age group 41 and over. The overall return rate on the postcards was 31.9%.

Table 8.

Data Collection Results: Postcard Solicitation of Participants

Age Group	Letters/ Postcards Sent	Postcards (Number Returned)	Postcards (Percent Returned)
17 to 21	500	111	22.2
22 to 32	500	159	31.8
33 to 40	201	90	44.8
41 +	151	74	49.0
Total	1352	434	31.9

The return rate was much higher for the survey questionnaires than for the postcards. Table 9 summarizes the results on the survey questionnaires sent to and returned by participants. Similar to the postcard return rate, the two younger age groups had return rates lower than the two older age groups. The lowest return rate (67.9%) was in the 22 to 33 age groups followed by the 17 to 21 age group (78.3%). Return rates greater than 80% occurred in age

groups 33 to 40 (82.2%) and age group 41 and over (85.1%). The overall return rate on the survey questionnaire was 76.5%. Each returned survey received an identification number from 001 to 400. All returned surveys were coded and scored. Analysis was conducted using SAS data analysis program of the VAX computer system.

Table 9.

Data Collection Results: Survey Questionnaires

Age Group	Surveys Sent	Survey Questionnaires (Number Returned)	Survey Questionnaires (Percent Returned)
17 to 21	111	87	78.4
22 to 32	159	108	67.9
33 to 40	90	74	82.2
41 +	74	63	85.1
Total Overall	434	332	76.5

Data Analyses

Scoring

Participants were assigned scores for the six continuous variables (Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, Instrument Support) based on their responses to items. Each item score was totaled to reflect a score from 5 to 0. For each variable (e.g., Reasons for Attending) responses to the items were totaled to reflect a score. A total score on a variable such as Reasons for Attending is an interplay of two features: the number or frequency of the items checked by the respondent and the point value associated with the item. For example, a high score may mean a large number of reasons but lower relative importance

or fewer reasons but high relative importance. The minimum and maximum scores for the variables are as follows: (a) Reasons for Attending (0 - 120), Perceived Barriers (0 - 225), Support Services (0 - 290), Emotional Support (0 - 50), Role Strain (0 - 130), Instrumental Support (0 - 39).

Descriptive Statistics

Using the SAS statistical package, descriptive statistics for continuous variables including mean, standard deviation, and range (minimum and maximum scores) were calculated for the independent variable (age) and the dependent variables (Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, Instrumental Support).

Regression

A separate regression analysis was conducted for each research question to determine the proportion of variance in each of the dependent variables (Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, and Instrumental Support) that can be explained by the independent variable, age. The F-Test was applied to each R^2 to determine level of significance.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter reports the descriptive statistics on the dependent variables and discusses the results of the study. Specifically, the inferential statistics used in the study are discussed including six simple linear regressions which were used for each of the six research questions and the additional analyses of demographic data (stage/year in academic program, part- and full-time status, and age group). A final section summarizes the results.

Descriptive Data on the Dependent Variables

The descriptive data reported here is used to explain how the participants responded to the data in the aggregate. Table 10 illustrates the means, standard deviations, and ranges for the dependent measures Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, and Instrumental Support. Each participant in the study received six scores based on her responses to the items associated with the dependent measures. Each item was totaled to reflect a score from 5 to 0.

Table 10

Descriptive Data on the Dependent Variables: Reasons for Attending (RA), Perceived Barriers to Attending (PB), Support Services (SS), Emotional Support (ES), Role Strain (RS), Instrumental Support (IS)

Measure	Potential Range of Scores	Mean	Standard Deviation	Minimum	Maximum
RA	0-120	61.5	12.5	17	91
PB	0-225	103.5	26.1	45	177
SS	0-290	200.5	3.1	59	279
ES	0-50	31.3	7.2	10	50
RS	0-130	61.3	17.3	16	114
IS	0-39	12.5	11.1	0	33

Results

The six research questions in the study concerned the relationship between the independent variable age and the dependent variables Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, and Instrumental Support. A separate regression analysis was conducted for each research question to provide an explanation of the proportion of variance in Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, and Instrumental Support (dependent variables) accounted for by age (independent variable). The coefficient of determination (R^2) was used to determine the percent of variance in each dependent variable that can be accounted for by age. The F-Test was computed to describe the ratio of variability for each dependent variable explained by the regression relationship versus the variability in the dependent variable unexplained by the regression relationship. Table 11 presents the results of the regression analysis.

Reasons for Attending

Age accounted for a significant proportion of the variance in the dependent variable Reasons for Attending, suggesting that as age increases so does Reasons for Attending score. The R^2 model was .0193 ($p < .01$), suggesting that as age of female undergraduate students increases so does the number of different reasons associated with attending school.

Perceived Barriers to Attending

Age accounted for a significant proportion of the variance in the dependent variable Perceived Barriers, suggesting that as age increases so does the Perceived Barrier score. The R^2 model was .0217 ($p < .01$), suggesting that as age of female undergraduate students increases, so does the number of perceived barriers associated with attending school.

Support Services

Research question 3 asked whether female students of different ages share similar perceived needs for certain types of student support services? Age did not account for a significant proportion of the variance in the dependent variable Support Services, suggesting that the need for certain types of student support services from the university, such as workshops on study skills, evening classes and academic advising, and flexible hours of registration, does not vary as age increases.

Emotional Support

Age did not account for a significant proportion of the variance in the dependent variable Emotional Support, suggesting that perceived emotional support by undergraduate female students from such sources as spouse or significant other, family, friends, employer, does not vary as age increases.

Role Strain

Age accounted for a significant proportion of the variance in the dependent variable Role Strain, suggesting that as age increases so does Role Strain score. The R^2 model was .0348 ($p < .001$), suggesting that perceived sources of role strain, such as the attitude of spouse or significant other about attending school, child care, finances, or feelings of guilt varies as age increases.

Instrumental Support

Age accounted for a significant proportion of the variance in the dependent variable Instrumental Support, suggesting that as age increases so does Instrumental Support score. The R^2 model was .1857 ($p < .0001$), suggesting that age accounts for differences in perceived degrees of assistance with domestic responsibilities, such as house cleaning, grocery shopping, paying bills, child care.

Table 11.

Results of Regression Analysis on Reasons for Attending (RA), Perceived Barriers to Attending (PB), Support Services (SS), Emotional Support (ES), Role Strain (RS), and Instrumental Support (IS)

Dependent Variable	Predictor	Model R^2	F Ratio	P Value
RA	Age	.0193	6.492	<.01
PB	Age	.0217	7.286	<.01
SS	Age	.0033	1.099	.30
ES	Age	.0001	0.017	.90
RS	Age	.0348	11.742	<.001
IS	Age	.1857	49.041	<.0001

Summary

For Reasons for Attending, Perceived Barriers, Role Strain, and Instrumental Support, age contributed significantly to the explanation of

performance on these dependent variable scales, suggesting that as age increases, so do the number of reasons for attending university, perceived barriers to attending university, perceived sources of role strain, and perceived degrees of instrumental support.

Age accounted for a nonsignificant proportion of the variance in the dependent variables Support Services and Emotional Support; age did not significantly account for differences in perceived needs for certain types of student support services and perceived degrees of emotional support.

Additional Analyses

Though not part of the design of this study, three additional analyses were performed using the demographic data from the sample to determine the extent to which stage (year) in academic program, part- and full-time status, and age group account for differences on the dependent variables (Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, Instrumental Support) used in the study. For each of these three analyses, an analysis of variance (ANOVA) was conducted with the three grouping variables to determine whether differences existed in the dependent variable mean scores for these groups. If the F ratio from the ANOVA indicated statistical significance, the Scheffe's test for multiple comparisons of mean scores was applied to isolate the source(s) of these differences.

For stage (year) in academic program, results of the ANOVA as indicated in Table 12 found no statistical significant differences for Reasons for Attending ($F_{5,326} = 1.11$, NS), Perceived Barriers ($F_{[5,324]} = 2.31$, NS), Support Services ($F_{[5,326]} = 0.72$, NS), Emotional Support ($F_{[5,324]} = 2.15$, NS), Role Strain ($F_{[5,322]} = 2.01$, NS), and Instrumental Support ($F_{[5,211]} = 2.13$, NS) mean scores.

Table 12

ANOVA of Stage (Year) in Academic Program with Dependent Measures for Reasons for Attending (RA), Perceived Barriers to Attending (PB), Support Services (SS), Emotional Support (SS), Role Strain (RS), Instrumental Support (IS)

Source	df	ANOVA SS	Mean Square	F value	p value
Year in School with RA	5	880.57	176.11	1.13	ns
Error	326	50761.65	155.71		
Corrected Total	331	51642.23			
Year in School with PB	5	7022.65	1404.53	2.31	ns
Error	324	197116.62	608.38		
Corrected Total	329	204139.27			
Year in School with SS	5	3946.79	789.36	0.72	ns
Error	326	359341.91	1102.27		
Corrected Total	331	363288.69			
Year in School with ES	5	493.66	98.73	2.15	ns
Error	324	14890.59	45.96		
Corrected Total	329	15384.25			
Year in School with RS	5	2541.66	508.33	2.01	ns
Error	322	81262.14	252.37		
Corrected Total	327	83808.80			
Year in School with IS	5	635.70	127.14	2.13	ns
Error	211	12619.94	59.81		
Corrected Total	216	13255.64			

For part- and full-time status, results of the omnibus ANOVA indicated significant differences (see Table 13) for Reasons for Attending ($F_{[1, 328]} = 6.02$, $p < .0147$), Support Services ($F_{[1, 328]} = 4.09$, $p < .0438$), Emotional Support ($F_{[1, 326]} = 10.52$, $p < .0013$), Role Strain ($F_{[1, 324]} = 5.38$, $p < .0209$), and

Instrumental Support ($F_{[1, 214]} = 32.38$, $p < .0001$) mean scores. The results of the ANOVA suggest that part- and full-time students had statistically significant different mean scores for these variables. Nonsignificant differences were shown for Perceived Barriers ($F_{[1, 326]} = 2.87$, NS) mean scores, suggesting that the average Barriers to Attending scores do not vary for full- and part-time status.

Table 13

ANOVA of Part- and Full-time Status with Dependent Measures for Reasons for Attending (RA), Perceived Barriers to Attending (PB), Support Services (SS), Emotional Support (SS), Role Strain (RS), Instrumental Support (IS)

Source	df	ANOVA SS	Mean Square	F value	p value
Part-/Full-time with RA	1	927.79	927.79	6.02	.0147
Error	328	50584.40	154.22		
Corrected Total	329	51512.20			
Part-/Full-time with PB	1	1770.33	1770.33	2.87	ns
Error	326	201278.66	617.42		
Corrected Total	327	203048.99			
Part-/Full-time with SS	1	4470.86	4470.86	4.09	.0438
Error	328	358131.20	1091.86		
Corrected Total	329	362602.06			
Part-/Full-time with ES	1	474.14	474.14	10.52	.0013
Error	326	14687.42	45.05		
Corrected Total	327	15161.56			
Part-/Full-time with RS	1	1348.31	1348.31	5.38	.0209
Error	324	81136.79	250.42		
Corrected Total	325	82485.09			

(table continues)

Table 13, continued

ANOVA of Part- and Full-time Status with Dependent Measures for Reasons for Attending (RA), Perceived Barriers to Attending (PB), Support Services (SS), Emotional Support (SS), Role Strain (RS), Instrumental Support (IS)

Source	df	ANOVA SS	Mean Square	F value	p value
Part-/Full-time with IS	1	1721.70	1721.70	32.28	.0001
Error	214	11415.11	53.34		
Corrected Total	215	13136.81			

Based on Scheffe's test for multiple comparisons, summarized in Table 14, part-time students had a higher mean score on the Reasons for Attending scale than did full-time students ($F_{[1, 328]} = 3.87$, $p < .05$). These results suggest that female undergraduate students who attend the university on a part-time basis have more reasons (i.e. career, financial, self-fulfillment, etc.) for attending university than do full-time students. Also, part-time students perceived more emotional support in pursuance of their education, ($F_{[1, 326]} = 3.87$, $p < .05$), and reported more perceived sources of role strain from sources such as spouse, children, academics ($F_{[1, 324]} = 3.87$, $p < .05$), and more instrumental support or help with household chores from their spouses or significant others $F_{[1, 214]} = 3.87$, $p < .05$). Conversely, full-time students had a higher mean score on the Support Services scale ($F_{[1, 328]} = 3.87$, $p < .05$), suggesting that these students place more importance on student support services than do part-time students.

Table 14

Scheffe's Multiple Comparison of Means for Part- and Full-Time Students with Dependent Measures For Reasons for Attending (RA), Perceived Barriers to Attending (PB), Support Services (SS), Emotional Support (SS),Role Strain (RS), Instrumental Support (IS)

Scheffe Grouping	N	Mean Score	df	F value
Part-time-RA	137	63.46	328	3.87*
Full-time-RA	193	60.06		
Part-time-PB	136	106.76	326	ns
Full-time-PB	192	102.04		
Part-time-SS	137	196.10	328	3.87*
Full-time-SS	193	203.57		
Part-time-ES	137	32.96	326	3.87*
Full-time-ES	191	30.51		
Part-time-RS	135	64.30	324	3.87*
Full-time-RS	191	60.17		
Part-time-IS	112	19.79	214	3.89*
Full-time-IS	104	14.14		

* Significant at the .05 level

For the four age groups (17-21, 22-32, 33-40, 41 and over) results of the ANOVA in Table 15 indicated statistically significant differences on Reasons for Attending ($F_{[3, 328]} = 7.53$, $p < .0001$), Perceived Barriers ($F_{[3, 326]} = 9.83$, $p < .0001$), Role Strain ($F_{[3, 324]} = 7.98$, $p < .0001$), and Instrumental Support ($F_{[3, 213]} = 41.81$, $p < .0001$) mean scores. These results suggest that age group accounts for differences in the Reasons for Attending, Perceived Barriers to Attending, Role Strain, and Instrumental Support mean scale scores. For Support Services ($F_{[3, 328]} = 0.34$, NS) and Emotional Support ($F_{[3, 326]} = 0.78$, NS), mean scale scores were not statistically significant, suggesting that age group does not account for differences on these scales.

Table 15

ANOVA of Age Groups with Dependent Measures for Reasons for Attending (RA), Perceived Barriers to Attending (PB), Support Services (SS), Emotional Support (SS), Role Strain (RS), Instrumental Support (IS)

Source	df	ANOVA SS	Mean Square	F value	p value
Age Group with RA	3	3327.35	1109.12	7.53	.0001
Error	328	48314.88	147.30		
Corrected Total	331	51642.23			
Age Group with PB	3	16937.09	5645.70	9.83	.0001
Error	326	187202.19	574.24		
Corrected Total	329	204139.27			
Age Group with SS	3	1123.13	374.38	0.34	ns
Error	328	362165 .57	1104.16		
Corrected Total	331	363288.70			
Age Group with ES	3	110.06	36.69	0.78	ns
Error	326	15274.19	46.85		
Corrected Total	329	15384.25			
Age Group with RS	3	5763.74	1921.24	7.98	.0001
Error	324	78040.06	240.86		
Corrected Total	327	83803.80			
Age Group with IS	3	4912.85	1637.61	41.81	.0001
Error	213	8342.79	39.17		
Corrected Total	216	13255.64			

To determine which age group means were different from the other age group means, the Scheffe's test for multiple comparisons of mean scores was performed. The results of this analysis are summarized in Table 16. For the Reasons for Attending scale, results indicated that the average mean scale score for age group 17-21 was significantly lower than that of the other three

age groups ($F_{[3, 328]} = 2.63$, $p < .05$). These results suggest that female undergraduate students in the 17-21 age group have fewer reasons for attending school than the other three age groups. The three older age groups were not significantly different from each other. Similarly, for the Perceived Barriers scale, results indicated that the average mean scale score for age group 17-21 was significantly lower than the other three age groups ($F_{[3,326]} = 2.63$, $p < .05$). These results suggest that female undergraduate students in the 17-21 age group have fewer problems associated with attending school than those of the other three age groups. The three older age groups were not significantly different from each other.

Results of the Role Strain scale indicated that the average mean scores for the 17-21 and 22-33 age groups were significantly similar but they differed significantly from the mean scores of the 34 to 40 and 41 and over age groups ($F_{[3, 326]} = 2.63$, $p < .05$). These results suggest that female undergraduate students in the 17-21 and 22-33 age groups have fewer perceived sources of role strain than do older age groups. The two older age groups (33-40 and 41 and over) and two younger age groups (17-21, 22-32) were not significantly different from each other.

Finally, the average mean score on the Instrumental Support score for the 17-21 age group was significantly lower ($F_{[3, 211]} = 2.63$, $p < .05$) than that of the other three age groups. These results suggest that female undergraduate students in the 17-21 age group perceive less instrumental support or assistance with household chores than do females in the three older age groups. The three older age groups' average mean scores did not differ significantly from one another.

Table 16

Scheffe's Multiple Comparison of Means with Age Group for Reasons for Attending (RA), Perceived Barriers to Attending (PB), Role Strain (RS), Instrumental Support (IS)

Scheffe Grouping	N	Mean Score	df	F value
RA Scale				
Age Group (34-40)	74	65.08		
Age Group (41+)	63	62.44		
Age Group (22-33)	108	62.43		
Age Group (17-21)*	87	56.44	328	2.63**
PB Scale				
Age Group (34-40)	73	111.63		
Age Group (22-33)	108	107.81		
Age Group (41+)	63	104.65		
Age Group (17-21)*	87	92.63	326	2.63**
RS Scale				
Age Group (34-40)	73	68.26		
Age Group (41+)	63	63.62		
Age Group (22-33)*	108	61.32		
Age Group (17-21)*	85	56.38	326	2.63**
IS Scale				
Age Group (34-40)	65	20.52		
Age Group 41+)	54	19.61		
Age Group (22-33)	66	17.04		
Age Group (17-21)*	32	6.19	211	2.63**

* Indicates significantly different age group
** Significant at the .05 level

Summary of Additional Analyses

Stage (year) in academic program did not account for significant differences on any of the dependent variable scale scores; Reasons for Attending, Perceived Barriers to Attending, Support Services, Emotional Support, Role Strain, and Instrumental Support did not vary with stage (year) in academic program. For part- and full-time status, significant differences were found on the Reasons for Attending, Support Services, Emotional Support,

Role Strain, and Instrumental Support scales. Part-time students had significantly higher mean scores on the Reasons for Attending, Emotional Support, Role Strain, and Instrumental Support scales, suggesting that part-time female undergraduate students have more reasons associated with attending school, more perceived barriers while attending school, more perceived sources of role strain, and more perceived degrees of instrumental support. For full-time students, a significantly higher mean score was indicated on the Support Services scale suggesting that support services from the university while attending school were important. No differences were found in the Perceived Barriers to Attending mean scale scores of full- and part-time students.

For the four age groups (17-21, 22-33, 34-40, and 41 and over), significant mean score differences were found on the Reasons for Attending, Perceived Barriers to Attending, Role Strain, and Instrumental Support scales. For the Reasons for Attending, Perceived Barriers to Attending, and Instrumental Support scales, the average mean score for the 17-21 age group was significantly lower than those of the three older age groups, suggesting that younger females perceive fewer reasons associated with attending university, have fewer perceived barriers to attending university, and have lower perceived degrees of instrumental support. For the Role Strain scale, the average mean scores for the 17-21 and 22-33 age groups were significantly similar but lower than the mean scores of the 34 to 40 and 41 and over age groups. Older females perceived more sources of role strain, such as spouse or significant other, child care, parent, and employee.

CHAPTER V

SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS AND RECOMMENDATIONS

This chapter consists of: a summary of the research findings, conclusions drawn from the study, limitations of the study, implications of the study for student affairs professionals and counselor educators, and recommendations for further research.

Summary

This study examined whether undergraduate female students' perceived (a) reasons for attending postsecondary education, (b) barriers to attending postsecondary education, (c) need for student support services, (d) need for emotional support, (e) role strain, and (f) need for instrumental support varied by age. The population studied was a stratified sample of 1,351 undergraduate female students representing different ages from UNCG. The participants for the study were determined as those undergraduate females who responded to an invitation to participate. A survey questionnaire developed by the researcher was sent to 434 undergraduate female students and responses were received from 332 students indicating a response rate of 76.5%.

As a part of the instrument development, a factor analysis was performed to determine if the 176 items comprising the scales were measuring the six variables addressed in the study. The relationship between the six variables and age was examined to determine if age significantly explained a

proportion of the variance in each dependent variable. Although not originally part of the design of the study, additional analyses were performed on three demographic variables (i.e., year in school, part- versus full-time enrollment status, and age group) to determine whether significant differences existed between these grouping variables and the dependent variables in the study.

Instrument Development

Results of the factor analysis of the instrument indicated that no common factor was found to underlie the item correlation structures across the six variables. However, with the exception of the items on the Reasons for Attending scale, the factor structures for the six scales were reasonably clear and interpretable; items that were similar within a scale tended to cluster on either a single factor or two factors. For the Reasons for Attending scale, however, several factors were found to underlie the item correlation structure and none of the items formed an interpretable cluster under a single factor. The 24 items that comprise the Reasons for Attending scale list many different reasons associated with attending school (e.g., financial, employment, family). One possible explanation for the Reasons for Attending scale is that no single variable can explain the many different reasons associated with attending school.

Items relating to family concerns and academic concerns clustered on separate factors on the Perceived Barriers scale. Items relating to workshops and administrative services clustered on separate factors on the Support Services scale. Similarly, items relating to family and academic support clustered on the Emotional Support scale; items relating to self-imposed stress such as guilt, family, children, and spouse clustered on the Role Strain scale.

The number of item clusters within each of these scales suggest that fewer variables comprise these scales. Finally, for the Instrumental Support scale, with the exception of two of the thirteen items comprising this scale, a single factor was found to underlie the interitem correlation structure.

Relationship Between Six Scales and Age

Results of the regression analysis indicated that age contributed significantly to the explanation of performance on the dependent variables of Reasons for Attending, Perceived Barriers, Role Strain, and Instrumental Support, suggesting that as age increases, so does the number of reasons for attending university, barriers to attending postsecondary education, perceived sources of role strain, and perceived degrees of instrumental support. Age explained the largest proportion of variance with the Instrumental Support variable. Age did not contribute significantly to the explanation of performance on the scales Support Services and Emotional Support, suggesting that female students' need for student support services and perceived degrees of emotional support do not vary with age.

Six Scales and Demographic Variables

Analyses of the demographic variables indicated that significant differences existed for part- versus full-time status, and age group; no significant differences existed for stage (year) in school. For part- and full-time status, part-time students had significantly higher mean scale scores on the Reasons for Attending, Role Strain, and Instrumental Support scales, suggesting that part-time female undergraduate students have more reasons for attending school, more perceived sources of role strain, and more perceived degrees of instrumental support. Full-time students had higher mean scores on the Support Services scale suggesting that support services

from the university while attending school were more important to this group. No differences were found in the Perceived Barriers scale scores of part- and full-time students.

For the four age groups (17-21, 22-33, 34-40, 41 and over), significant mean scale score differences were found on the Reasons for Attending, Perceived Barriers, Role Strain, and Instrumental Support scales. For the Reasons for Attending, Perceived Barriers, and Instrumental Support scales, the average mean scale score for the 17-21 age group was significantly lower than those of the three older age groups. This youngest age group (17-21), as these results suggest, perceived fewer reasons associated with attending university, fewer barriers while attending university, and lower perceived degrees of instrumental support. For Role Strain, the average mean scores for the 17-21 and 22-33 age groups were significantly similar and lower than the mean scores for the 34-40 and 41 and over age groups. These two older age groups perceived more sources of role strain than the two younger groups.

Finally, stage (year) in academic program did not account for significant differences on any of the dependent variables. In other words, the mean scale scores on the Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, and Instrumental Support were not significantly different for stage (year) in school.

Conclusions

This section includes a discussion of the Undergraduate Female Student Survey developed and an examination of the relationship of the dependent variables Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, and Instrumental Support with the

independent variable of age. Finally, conclusions are provided concerning the analyses performed in the study.

The Undergraduate Female Student Survey (UFSS) as a Research Instrument

The UFSS used in this study was developed based on the literature. All 176 items used in the survey were derived and referenced in the literature. The purpose of the factor analysis was to determine if the 176 items measured one of the six dependent variables (Reasons for Attending, Perceived Barriers, Support Services, Emotional Support, Role Strain, Instrumental Support) in the study. In order to accomplish this, two confirmatory factor analyses (CFA) were performed, one CFA with all 176 items to determine how well the items loaded on one of the six variables in the study; and, one CFA isolating the six scales to determine if the items comprising that scale loaded on a single factor for that scale.

For the first CFA, the majority of the items that composed each scale loaded highly on a single factor (Appendix C) with the exception of the Reasons for Attending scale. These results provide additional support to the literature in that the UFSS items derived from the literature groupings, for the most part, measure one of these variables. As discussed in Chapter II, much of the research on these literature groupings focused on older (25 and over) students as a generic group and little research exists using these six literature grouping variables across all ages. This research treated age as a continuous variable, and thus, exposed a sample of undergraduate females of all ages (traditional and reentry) to these literature groupings.

With the second CFA, for none of the six scales was a single factor found to underlie an item correlation structure. The Instrumental Support scale, however, produced the best results as all but two items within that scale loaded

on a single factor. With the exception of the items on the Reasons for Attending scale, the item factor structures were reasonably clear and interpretable as UFSS survey items that were similar within a scale tended to cluster and load on a single factor or two factors. Some specific conclusions about the six scales follow.

For the Reasons for Attending scale, though a few items formed interpretable clusters (i.e., social reasons, support from others) the majority of the items formed a complex mixture of several factors that were not easily interpreted. The items were based on literature which indicates that the reasons for returning to the university are many, such as preparation for a new career or career advancement (Rawlins, 1979; Aslanian & Brickell, 1980; Martin, 1988), self-fulfillment (Rawlins, 1979; Blanshan, Burns, & Geib, 1984; Wilson, 1990), or economic (Martin, 1988) and that no common denominator exists. Because there are many "different" reasons for returning to university, it may be difficult to develop a single construct called Reasons for Attending as these differences appear to be mutually exclusive and not correlated to form a single underlying factor.

For the Perceived Barriers scale, items relating to financial concerns, balancing school work with family concerns, and employment concerns loaded on separate factors while items relating to support from others clustered on two factors. These items support the literature which indicates there are many problems or barriers associated with attending postsecondary education for female reentry students (Scott, 1980; Smallwood, 1980; St. Pierre, 1989). Like the Reasons for Attending scale, because there are many "different" problems or barriers associated with attending the university, it may be difficult to develop a single construct called Perceived Barriers.

The Support Services scales had the largest number of instrument items (58) and had larger item clusters. Specific item clusters were programs on study skills and life planning, carpool and child care, support and advisement from faculty, and orientation. These Support Services items support the existing descriptive research that surveys the needs of female reentry students (Scott, 1980; Smallwood, 1980; Whaeton & Robinson, 1983; St. Pierre, 1989). The Support Services item clusters add to the paucity of literature addressing categories of needs (Lamb-Porterfield, Jones, and McDaniel, 1987), such as academic instruction, faculty support and instruction, personal development, and institutional support services.

The ten Emotional Support items relating to sources of emotional support (Berkove, 1979) such as spouse, children, faculty advisor, or employer formed clusters on separate factors. The results of the Emotional Support items support the literature on emotional support from spouse and family members (Novak & Thacker, 1991, Speer & Dorfman, 1986; Huston-Hoberg & Strange, 1986; Degroot, 1980). The Emotional Support items add new information to the literature on the little available research on emotional support outside the family (Speer & Dorfman, 1986), such as employer, friend, and faculty.

Results of the Role Strain scale relating to sources of role strain indicated items loaded on separate factors for self-imposed role strain (Gerson, 1985), family members and household responsibilities (Van Meter & Agronow, 1982), and spouse or significant other (Suitor, 1988). The Role Strain items add support to the existing literature as a means of measuring sources of role strain; the Role Strain item clusters support further investigation of categories of role strain (i.e., family, faculty, employer, parent, etc.)

Finally, for the Instrumental Support scale, with the exception of two (loading on two factors) of the thirteen items comprising this scale, a single factor was found to underlie the Instrumental Support variable and, thus, provides support for such a construct. The Instrumental Support items were based on the research of Huston-Hoberg & Strange (1986), the only research delineating types of instrumental support.

Based on the factor analysis, some conclusions may be derived about UFSS as a research instrument. First, a majority of UFSS items derived from the literature groupings on female reentry students measure one of these groupings. While a single factor did not underlie any one of the six scales, the large number of item clusters formed within the Perceived Barriers, Support Services, Emotional Support, and Role Strain scales, suggesting that categories of items comprise the scale construct. Second, all but two items on the Instrumental Support scale loaded on a single factor, suggesting that items comprising the Instrumental Support scale define that particular construct. The two items within that scale that loaded on two factors related to child care and may need to be reworded or moved to another scale. Third, the UFSS results provides an opportunity to refine the instrument further, especially focusing on those items that did not cluster and loaded on several factors. Fourth, while the dependent measures in the study were documented in the literature, the UFSS represents a significant contribution to the literature in that no one instrument was available that provides a means to measure systematically these major groupings related to reentry female students.

Factors Affecting Female Undergraduate Students

A contribution of this research was the examination of age as it relates to the major literature groupings identified. An extensive body of literature

was available on reentry students (Rawlins, 1979; Aslanian & Brickell, 1980; Martin, 1980, Thon, 1984). Some research provided systematic comparisons of traditional- and nontraditional-age college students (Jones, 1990; Prinot & Dunn, 1983; Kasworm, 1980). However, little research existed that assessed the effects of age on a particular variable (Wolfgang & Dowling, 1981; Baadenhoop & Johnson, 1980; Lance, Lourie, & Mayo, 1979; Blanshan, Burns, & Geib, 1984). In this research, the treatment of age as a continuous variable accounted for significant results on four of the six dependent measures used in this study.

Variables Affected By Age. The findings concerning reasons for attending the university support the existing literature which indicates that females attend higher education for many different reasons (Badenhoop & Johnson, 1980; Scott, 1980; Lamb-Porterfied, Jones, & McDaniel, 1987). However, older students tend to differ from their younger counterparts by having more reasons associated with attending postsecondary education. This information adds to the literature suggesting, that age accounts for differences in the number of reasons associated with attending the university. Similarly with Perceived Barriers, literature was available concerning barriers associated with attending the university by female reentry students (Scott, 1980; Smallwood, 1980; St. Pierre, 1989). Again, this research adds new information to the literature, suggesting that age accounts for an increase in the number of barriers associated with attending the university. Further information is added to the literature on younger female students as none of the research identified focused on barriers of female students under the age of 25.

Research on role strain for female students has focused on marital status (Gerson, 1985), gender (Gilbert, Manning, & Ponder, 1980), female

graduate students (Sales, Shore, & Bolitho, 1980), and sources (Van Meter & Agronow, 1982). The results of the present study also suggest that the number of sources related to role strain for female undergraduate students increases as age increases.

Finally, on the Instrumental Support scale, age accounted for the largest proportion of variance, suggesting that older undergraduate female students who are married or reside with a significant other may receive more assistance with household chores while attending school. These results may contradict some of the identified research which indicates that female reentry students reported that their male spouses were less willing to provide instrumental support (Rice, 1979; Huston-Hoberg, & Strange, 1986; Degroot, 1980).

Variables Not Affected by Age. Nonsignificant results were obtained for the Support Services; the perceived needs for student support services did not vary with age of the student. This result does not support the findings of Kasworm (1980), who examined whether age accounted for differences in satisfaction and needs of 18-22 and 26-years-and-older male and female undergraduate students. Kasworm (1980) found that younger students reported more need for and satisfaction with student support services than did older students. Other research suggests that reentry students (Aslanian & Brickell, 1980; Rawlins, 1979; Spratt, 1984; Thon, 1984) and reentry female students (Lamb-Porterfield, Jones, & McDaniel, 1987; Scott, 1980; Wheaton & Robinson, 1983) value support services provided by the institution. The results of this research suggest that though undergraduate females vary widely in ages, their perceived need for student support services does not vary.

With Emotional Support, most of the research has focused on perceived emotional support from reentry female students' from their spouses (Berkove, 1979; Rice, 1979; Houston-Hoberg, & Strange, 1986; Degroot, 1980). The present research adds the dimension of age. Based on the results of this study, the perceived degree of emotional support does not vary with age; females of all ages show similar needs for emotional support.

Additional Analyses on the Demographic Variables

Analyses were performed on the demographic variables of stage (year) at the university, part- and full-time status, and age group to determine if these variables accounted for differences on the dependent measures used in this research.

Stage (year) at the university did not account for significant differences on any of the dependent measures used in the study. With part- and full-time status, significant results were obtained for on the Reasons for Attending, Emotional Support, Role Strain, and Instrumental Support scales. These results indicated that female part-time students as a group had higher mean scale scores on the Reasons for Attending, Emotional Support, Role Strain, and Instrumental Support scales, and as a result, reported having more reasons associated with attending the university, more perceived emotional support, more sources of role strain, and more instrumental support. These results support the research of Suitor (1987), who found that part-time married reentry female students reported higher levels of emotional support and instrumental support than full-time students. Finally, full-time students had higher mean scale scores on the Support Services scale, suggesting that this group gave more importance to student support services.

For the four age groups (17-21, 22-33, 34-40, and 41 and over), significant differences were obtained on the Reasons for Attending, Perceived Barriers, Role Strain and Instrumental Support scales. The 17-21 age group had significantly lower mean scales scores on the Reasons for Attending, Perceived Barriers, and Instrumental Support scales while the mean scores for the three older age groups (22-33, 34-40, 41 and over) were not significantly different on these three scales. Students in the younger age group had fewer reasons associated with attending the university, fewer barriers while attending the university, and lower perceived degrees of instrumental support. These results add support to the statistically significant regression analyses addressing these three scales.

For the Role Strain scales, the mean scale scores of the 17-21 and 22-33 ages groups were significantly similar and significantly different from the mean scale scores of the two older age groups. The mean scale scores for the two older age groups were not significantly different on the Role Strain scale. These results also add additional support to the regression analysis on the Role Strain scale and suggest that older female students perceived more sources of role strain.

In summary, the additional analyses provide new information on female reentry students as none of the research identified assessed the effect of these demographic variables--year in the university, part- and full-time status, and age group. The results of age group variable provided additional support to the significant results on the regression analysis for the Reasons for Attending, Perceived Barriers, Role Strain, and Instrumental Support scales. Finally, the results of the part- and full-time status suggest that further research may be beneficial.

Limitations of the Study

This study was both exploratory and descriptive; it was designed to determine the effects of the variable age with factors associated with attending the university for undergraduate female students. As such, there are limitations which need to be acknowledged concerning the conclusions. These limitations provide a basis on which recommendations for further research may be made. The limitations are divided into the population studied and methodology employed.

Population Studied

The women in this study were female undergraduate students registered for the 1993 fall semester at UNCG. A limitation of the study is the generalizability of findings, or external validity. The question exists as to the degree which the results may be generalized to groups of undergraduate female students other than those attending UNCG.

The study may be limited by the method used to select the sample. The subjects were volunteers; i.e., those who agreed to participate in the study by returning the postcard. Those who participated in the study may be more motivated in general or more interested in the particular study. Since the study is based on volunteers and the population is composed of volunteers and nonvolunteers, the results may only be generalizable to volunteers as there is no way of knowing why the nonvolunteers did not participate.

Methodology Employed

The limitations of the survey instrument (i.e., the literature may not explain all of the variances) and the results of the factor analysis place limitations on the results of the study. The results of the factor analysis, indicating a single factor did not underlie any of the factor structures for the

six scales, places limitations on the results of the study. Related to the instrument is the self-report data. All data were collected through self-report. The study did not include a method to confirm or collaborate responses nor to assess their accuracy. There was no assurance that the respondent actually was the one who answered the survey and that the items were understood (Issacs & Michael, 1990). Also, with any instrument there is always the possibility that the participants' true response is not listed among the alternatives (Gay, 1987). Finally, as noted in Chapter III, a total score on a variable such as Reasons for Attending represents an interplay of two features: the number or frequency of the items checked by the respondent and the point value associated with the item. A high score may mean a large number of reasons but lower relative importance or fewer reasons but high relative importance. This difference was not addressed in the study and should be considered in later research.

Implications for Institutions and Student Affairs Professionals

The information provided in this study can help professionals become more knowledgeable about the student population being served. The present study offers information on factors that are the responsibility of the institutions (i.e., barriers related to the institution, student support services) and factors which are not the direct responsibility of the institution (i.e., role strain, emotional support, instrumental support). All these factors can affect a female student's academic success in the institution.

The results of this study suggest that younger female students have fewer problems relating to college experience than do older female students. Some of the problems of older students relate to personal identity, marital status, career, and support from significant people outside the institution. A

challenge for the institution and for student affairs professionals will be to offer academic programs and support services to a student population representing a complex mixture marked by cultural diversity, age, and experience.

Additional progress may be made by turning to human resources professionals in the corporate sector for strategies to address potential customer/student markets and methods to make the organization's existing programs and services more sensitive to the clientele (students) served. For addressing the potential student markets, institutions may need to adopt a "customer focus" and may benefit by using strategic planning, a process of developing and maintaining a strategic fit between the institution's mission and goals and its changing marketing conditions (Kotler & Fox, 1985). The process of strategic planning involves performing environmental analysis, identifying major resources, formulating and revising goals and strategies for reaching realistic markets. Each year corporations conduct an environmental analysis to identify potential markets, align resources (i.e, personnel, financial, programs) to meet the needs of potential markets, revise the corporate mission and set goals to encompass these potential markets, and implement key strategies (e.g., revised and new programs and products) to attract potential markets.

Similarly, colleges and universities should consider identifying both populations (traditional and reentry) in the institution's mission and goals and begin implementing aggressive marketing strategies that address not only the traditional female student population, but the growing population of reentry females. When necessary, accommodations in academic programs (i.e., convenient evening and weekend course offerings, accelerated programs)

may need to be implemented to meet the needs of this group. Traditional concerns about academic rigor and full-time status, though important, should not negate the need to develop viable academic programs for this population.

For support services sensitive to the needs of the student/customer, human resource departments in corporations now offer an array of services that contribute to the health of employees and vitality of the organization. Many organizations offer employee assistance counseling to all members of the family, child care, health and wellness programs, and recreation and social programs. Colleges and universities should consider offering similar services. Though not part of the academic mission, these may enhance the female reentry students likelihood for academic success. Services such as child care, health and wellness, and counseling services for students dealing with the stress of multiple roles demonstrate institutional awareness that the student/customer, whether they be traditional females or reentry females, have issues that may affect product/academic program consumption. Programs that demonstrate the institution's awareness of these issues increase the likelihood of customer consumption and satisfaction. The information provided in this study can give student affairs professionals some important background data for decision-making regarding such programs and services.

An ongoing challenge for institutions and student affairs professionals will be to devise strategies to address the needs of diverse student populations. The more successful institutions will be those which recognize that a student's problems and development should be considered in the context of the total college or university. This means taking a more wholistic approach to the student experience. While the institution must continue to fulfill its commitment to academic excellence, it must also recognize that this diverse

population comes with a variety of issues that may affect their academic success. For student affairs professionals, this means offering programs that facilitate academic success.

Implications for Future Research

The recommendations for future research are designed, in part, to address the results of the study and its limitations. Recommendations for future research should focus on the following: (a) populations of female students of different ages at a variety of institutions; (b) the research instrument used in the study; and (c) the effects of other variables on the dependent measures used in this study.

While the present study offers information on female students of different ages, future studies involving larger samples at a variety of institutions may further define the differences revealed in this study. For example, what differences on the dependent measures used in this study would be observed at public and private institutions? What differences would be observed with undergraduate females at a women's college or single-sex institution? Further, what difference would be observed at urban versus rural institutions?

More research should be performed on the UFSS as a research instrument. In the present study, the UFSS did reasonably well in differentiating the six variables addressed in this research. Some items within the scales need to be either eliminated or reworded to enhance their discriminate capabilities and reduce the number of factors loading on a particular scale. Further, the revised UFSS should be used with different and larger samples with further examination of items within a scale.

More research is needed on the effects of other variables, and how these variables account for variances in the dependent measures used in the present study. For example, little research is available on undergraduate male students (Benshoff, 1991) of different ages. Other studies should address marital status, race, graduate students, and undergraduate and graduate students at public versus private institutions. Other research should focus on combined effects of multiple variables such as gender and race on the dependent measures used in the present study. In addition, other studies would be useful to determine if perceived barriers or perceived degrees of emotional and instrumental support change over time. Minor modifications in the UFSS would provide an opportunity to assess the perceptions of spouses on these dependent measures. For example, do husbands of female undergraduate students share their spouse's perceptions on these dependent measures? Finally, research on the degree to which coping skills of traditional-age and reentry female account for differences on the dependent measures addressed in this study may be a useful addition to the literature. Yarborough and Schaffer (1989) found that traditional students report higher test anxiety than reentry students; other research could investigate the degree to which coping skills account for differences in Perceived Barriers, Role Strain, and Instrumental Support. For example, to what degree does level of coping skill account for difference with Perceived Barriers, Role Strain, and Instrumental Support?

Concluding Remarks

This study investigated whether perceptions of undergraduate female students' reasons for attending university, barriers associated with attending university, preferences for student support services, sources of emotional support, sources of role strain, and degree of instrumental support vary by

age. Results of this study suggest that age accounts for differences on four of the dependent variables (i.e., Reason for Attending, Perceived Barriers, Role Strain, and Instrumental Support) addressed in this research. In addition, the results suggest that certain demographic variables (i.e., part- full-time status, age group) account for differences with these dependent measures. This study provides useful information that institutions may use to become more knowledgeable about the populations they serve. Such knowledge can help institutions better address the differing needs of their students.

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Appendix A

List of Survey Items Developed from the Literature

Survey Item	Literature Reference
Reasons for attending school (RA)	
(1) enhance present career/job	Beder & Valentine, 1990; Bruce, Hart, & Sullivan, 1990; Wilson, 1989; Mohney & Anderson, 1988; Henry, 1985; Hu, 1985; Blanshan, Burns, & Geib, 1984; Sewell, 1984; Finnegan, Westefeld, & Elmore, 1981; Rawlins, 1979; Morstain & Smart; 1977
(2) preparation for a new career/job	Astin; 1990; Bruce, Hart, & Sullivan, 1990; Wilson, 1989; Read, Elliott, Escobar, & Slaney, 1988; Martin, 1988; Clayton & Smith, 1987; Sewall, 1984; Hu, 1985; Blanshan, Burns, & Geib, 1984; Aslanian & Brickell, 1980; Badenhoop & Johansen, 1980; Scott, 1980; Rawlins, 1979
(3) dissatisfaction with present job	Badenhoop & Johansen, 1980; Sales, Shores, & Bolitho, 1980;
(4) career reentry of to get back into the job market	Bruce, Hart, & Sullivan, 1990
(5) self exploration or an opportunity to explore myself and find out who I really am	Rawlins, 1979; Scott, 1980; Sewall, 1984; Clayton & Smith, 1987
(6) self-fullfillment or a way to give some meaning and purpose to my life	Astin, 1990; Beder & Valentine, 1990; Bruce, Hart, & Sullivan, 1990; Mohney & Anderson, 1988; Martin, 1988; Clayton & Smith, 1987; Henry, 1985; Blanshan

	Burns, & Geib, 1984; Scott, 1980
(7) raise the family standard and style of living	Beder & Valentine, 1990; Clayton & Smith, 1987
(8) a change -- divorce, separation, death of spouse, birth of a child, children no longer dependent -- in the family structure	Beder & Valentine, 1990; Mohney & Anderson, 1988; Read, Elliott, Escobar, & Slaney, 1988; Ross, 1988; Blanshan, Burns, & Geib, 1984; Aslanian & Brickell, 1980; Scott, 1980; Rawlins, 1979
(9) to share what I learn by helping others	Beder & Valentine, 1990; Clayton & Smith, 1987; Morstain & Smart; 1977
(10) a way to meet new people	Clayton & Smith, 1987
(11) employer wanted me to go	Hu, 1985; Blanshan, Burns, & Geib, 1984; Morstain & Smart; 1977
(12) to gain a new perspective on my marital relationship	Clayton & Smith, 1987; Blanshan, Burns, & Geib, 1984
(13) spouse or significant other encouraged me	Mohney & Anderson, 1988; Ross, 1988; Blanshan, Burns, & Geib, 1984
(14) friends/others encouraged me	Beder & Valentine, 1990; Mohney & Anderson, 1988; Blanshan, Burns, & Geib, 1984; Ross, 1988
(15) enhance economic or financial status	Astin, 1990; Beder & Valentine, 1990; Martin, 1988; Ross, 1988; Clayton & Smith, 1987; Henry, 1985
(16) reputation of academic program	Blanshan, Burns, & Geib, 1984
(17) content of the academic program	Blanshan, Burns, & Geib, 1984

(18) more free time that I had before	Astin, 1990; Beder & Valentine, 1990; Blanshan, Burns, & Geib, 1984; Aslanian & Brickell, 1980; Scott, 1980; Morstain & Smart; 1977
(19) geographically convenient location	Blanshan, Burns, & Geib, 1984
(20) needed to test ability to do college work	Beder & Valentine, 1990; Blanshan, Burns, & Geib, 1984
(21) make more friends	Morstain & Smart; 1977; Sewall, 1984; Hu, 1985; Clayton & Smith, 1987; Henry, 1985
(22) get away from daily routine	Sewell, 1984
(23) dissatisfaction at home	Read, Elliott, Escobar, & Slaney, 1988
(24) satisfaction of just getting a degree	Sewell, 1984
(25) just for more education or knowledge	Beder & Valentine, 1990; Wilson, 1989; Read, Elliott, Escobar, & Slaney, 1988; Mohney & Anderson, 1988; Martin, 1988; Clayton & Smith, 1987; Hu, 1985; Sewall, 1984; Morstain & Smart; 1977
Barriers associated with attending university	(PB)
(1) financial or cost of education -- tuition, fees, book	Berkmeyer & Dorsett, 1991; Byrd, 1990; Blanshan, Burns, & Geib, 1984; Martin, 1988
(2) attendance requirements	Byrd, 1990
(3) economic concerns -- decrease in income	Wilson, 1989; Gerson, 1985; Blanshan, Burns, & Geib, 1984; Rawlins, 1979
(4) lack of financial aid	Wheaton and Robinson, 1983; Smallwood, 1980; Hu, 1985
(5) fear of success	Smallwood, 1980

(6) program timetable too demanding	Berkmeyer & Dorsett, 1991; Byrd, 1990
(7) afraid I'm my be too old to compete with younger students	Byrd, 1990; Martin, 1988; Wilson, 1989; Burke, 1987; Richter-Anton, 1986; Gilbert, Manning, & Ponder, 1980; Smallwood, 1980; Rawlins, 1979
(8) don't enjoy studying	Byrd, 1990
(9) balancing job responsibilities and time for study	Byrd, 1990; Gerson, 1985; Richter-Anton, 1986; Smallwood, 1980
(10) balancing home responsibilities and time for study	Byrd, 1990; Burke, 1987; Wheaton & Robinson, 1983; Sales, Shore, & Bolitho, 1980; Scott, 1980; Gerson, 1985
(11) class scheduling conflicts with job	Berkmeyer & Dorsett, 1991; Blanshan, Burns, & Geib, 1984; Gerson, 1985; Martin, 1988; Malin, Bray, Doughtery,& Skinner, 1980; Smallwood, 1980; Brandenburg, 1974
(12) class scheduling conflicts with home responsibilities	Berkmeyer & Dorsett, 1991; Burke, 1987; Blanshan, Burns, & Geib, 1984; Gerson, 1985; Buetell & Greenhaus, 1983; Gilbert, Manning, & Ponder, 1980
(13) class scheduling conflicts with family -- spouse and children -- responsibilities	Terrell, 1990; Burke, 1987; Griff, 1987; Gerson, 1985; Hite, 1985; Beutell & Greenhaus, 1983; Gilbert, Manning, & Ponder, 1980; Roach,1976
(14) having enough time for spouse or significant other	Sales, Shore, & Bolitho, 1980

(15) having enough time for friends	Sales, Shore, & Bolitho, 1980
(16) having enough time for children	Sales, Shore, & Bolitho, 1980
(16) having enough time to get to the library	Sales, Shore, & Bolitho, 1980
(17) just managing time	Terrell, 1990; Gerson, 1985; Blanshan, Burns, & Geib, 1984; Martin, 1988
(18) lack of time	Byrd, 1990; Richter-Anton, 1986; Gerson, 1985
(19) racial discrimination	Blanshan, Burns, & Geib, 1984
(20) sexual discrimination	Blanshan, Burns, & Geib, 1984
(21) lack of opportunity to socialize with persons in similar situations	Blanshan, Burns, & Geib, 1984; Smallwood, 1988
(22) finding household help	Sales, Shore, & Bolitho, 1980
(23) lack of support (or relationships) from parents	Smallwood, 1980
(24) change in job for spouse or significant other	Blanshan, Burns, & Geib, 1984
(25) decrease in income	Richter-Anton, 1986; Blanshan, Burns, & Geib, 1984
(26) lack of acceptance by other students	Blanshan, Burns, & Geib, 1984; Smallwood, 1980
(27) lack of acceptance by faculty	Blanshan, Burns, & Geib, 1984; Sales, Shore, & Bolitho, 1980; Smallwood, 1980
(28) lack of support from family	Berkmeyer & Dorsett, 1991;Berkmeyer & Dorsett, 1991; Byrd, 1990; Terrell, 1990; Wilson, 1989; Read, Elliott, Escobar, & Slaney, 1988; Blanshan, Burns, & Geib, 1984; Farmer & Fyans, 1983; Ballmer & Cozby, 1981; Smallwood, 1980

(29) lack of support from spouse or significant other	Huston-Hoburg & Strange, 1986; Buetell & Greenhaus, 1983; Gilbert, Manning, & Ponder, 1980; Sales, Shore, & Bolitho, 1980; Scott, 1980; Smallwood, 1980; Berkove, 1979; Roach, 1976
(30) lack of support from employer	Wilson, 1989; Martin, 1988; Farmer & Fyans, 1983
(31) lack of support from friends	Sales, Shore, & Bolitho, 1980
(32) lack of support from parents	Farmer & Fyans, 1983; Smallwood, 1980
(33) concern about personal safety on the campus	Blanshan, Burns, & Geib, 1984; Berkmeyer & Dorsett, 1991
(34) commuting or transportation problems	Berkmeyer & Dorsett, 1991; Blanshan, Burns, & Geib, 1984; Wilson, 1984
(35) unreliable or lack of child care	Berkmeyer & Dorsett, 1991; Terrell, 1990; Martin, 1988; Blanshan, Burns, & Geib, 1984; Wheaton and Robinson, 1983; Sales, Shore, & Bolitho, 1980; Smallwood, 1980; Brandenburg, 1974
(36) pressure to excel get high grades	Berkmeyer & Dorsett, 1991; Gilbert, Manning, & Ponder, 1980; Gilbert, Manning, & Ponder, 1980; Rawlins, 1979
(37) lack of specific skills or abilities for academic work	Wilson, 1989; Wilson, 1989; Blanshan, Burns, & Geib, 1984; Sales, Shore, & Bolitho, 1980; Smallwood, 1980; Brandenburg, 1974
(38) frustrating institutional "red tape"	Berkmeyer & Dorsett, 1991; Byrd, 1990; Richter-Anton, 1986; Brandenburg, 1974; Christian & Wilson, 1985;

	Wilson, 1989; Rawlins, 1979
(39) information regarding campus resources not accessible	Blanshan, Burns, & Geib, 1984
(40) insufficient energy level	Berkmeyer & Dorsett, 1991; Blanshan, Burns, & Geib, 1984
(41) learning new computer skills	Berkmeyer & Dorsett, 1991
(42) need to be more assertive	Smallwood, 1980
(43) lack of physical energy	Byrd, 1990; Blanshan, Burns, & Geib, 1984
(44) unreliable transportation to the campus	Byrd, 1990; Berkmeyer & Dorsett,1991
(45) feel unsafe on the campus at night	Berkmeyer & Dorsett, 1991; Blanshan, Burns, & Geib, 1984; Hu, 1985
(46) feelings of guilt about leaving family	Berkmeyer & Dorsett, 1991; Byrd, 1990; Terrell, 1990; Wilson, 1989; Blanshan, Burns, & Geib, 1984; Smallwood, 1980; Gerson, 1985; Wheaton and Robinson, 1983; Kelley, 1982
(47) standardized tests required for admission	Wheaton and Robinson, 1983
(48) courses I want are not scheduled when I can attend	Byrd, 1990; Martin, 1988; Wilson, 1989
(49) fear of failure	Slaney & Dickson, 1985
(50) afraid no one will hire me because of my age	Slaney & Dickson, 1985
(51) no place to study	Byrd, 1990
(52) not sure what I want to learn and eventually do	Byrd, 1990; Slaney & Dickson, 1985; Slaney, 1986; Richter-Anton, 1986; Wheaton and Robinson, 1983

(53) length of time out of school between high school and college	Lance, Lourie, & Mayo, 1979
(54) lack of confidence in my ability	Wilson, 1989; Griff; 1987; Blanshan, Burns, & Geib, 1984; Farmer & Fyans, 1983; Wheaton and Robinson, 1983; Smallwood, 1980; Scott, 1980

Support Services needed (SS)

Orientation

(1) campus orientation and tour	Lamb-Porterfield, Jones, McDaniel, 1987; Burke, 1987; Wheaton & Robinson, 1983; Rawlins, 1979
(2) a family orientation program	Shriberg, 1984; Thon, 1984; Leach, 1984; Terrell, 1990
(3) campus orientation programs for students of all ages	Shriberg, 1984; Bauer, 1981
(4) community programs explaining what the institution has to offer	Mulliken, 1985; Wheaton & Robinson, 1983; Shriberg, 1984; Thon, 1984
(5) information about university/ college services	Bruce, Hart, & Sullivan, 1990; Burke, 1987; Blanshan, Burns, & Geib, 1984; Rawlins, 1979
(6) a college brochure about adult students	Mulliken, 1985
(7) a special orientation program for adult students	Steltenpohl & Shipton, 1986; Mulliken, 1985; Kasworm, 1980
(8) a special academic advisor for new adult students	Blanshan, Burns, & Geib, 1984; Mulliken, 1985

Student services

(1) car pool information	Mulliken, 1985

(2) on-campus employment opportunities	Lamb-Porterfield, Jones, McDaniel, 1987
(3) financial aid information	Bruce, Hart, & Sullivan, 1990; Lamb-Porterfield, Jones, McDaniel, 1987; Wheaton & Robinson, 1983; Shriberg, 1984; Thon, 1984; Kasworm, 1980
(4) accessible parking facilities	Bruce, Hart, & Sullivan, 1990; Hu, 1985; Lamb-Porterfield, Jones, McDaniel, 1987; Shriberg, 1984
(5) carpool information and referral	Lamb-Porterfield, Jones, McDaniel, 1987
(6) a parent locator telephone number by which students' children could reach their parents at school in an emergency	Mulliken, 1985
(7) day and evening child care	Sewall, 1984; Terrell, 1990
(8) child care information	Bruce, Hart, & Sullivan, 1990; Lamb-Porterfield, Jones, McDaniel, 1987; Blanshan, Burns, & Geib, 1984; Mulliken, 1985; Hu, 1985; Wheaton & Robinson, 1983; Thon, 1984
(9) housing information-on and off-campus	Lamb-Porterfield, Jones, McDaniel, 1987; Blanshan, Burns, & Geib,1984
(10) housing on-campus for younger and older students	Shriberg, 1984
(11) increased awareness of adult students by student organizations -- student government, student newspaper, sororities/ fraternities, etc.	Mulliken, 1985; Thon, 1984
(12) a place to socialize with students of similar age	Blanshan, Burns, & Geib, 1984;

(13) phone-in registration	Mulliken, 1985; Rawlins, 1979 Bruce, Hart, & Sullivan, 1990; Richter-Anton, 1986; Hu, 1985; Leach, 1984
(14) evening and weekend registration	Bruce, Hart, & Sullivan, 1990; Lamb-Porterfield, Jones, McDaniel, 1987; Shriberg, 1984
(15) evening and weekend bookstore hours	Lamb-Porterfield, Jones, McDaniel, 1987
(16) evening medical facilities hour	Lamb-Porterfield, Jones, McDaniel, 1987
(17) flexible credit arrangements	Shriberg, 1984
(18) multiple food service options	Shriberg, 1984
(19) exercise and wellness facilities	Shriberg, 1984
(20) religious center	Kasworm, 1980
(22) student health facilities	Thon, 1984
(23) pro-rated fees	Thon, 1984
(24) adult resources center	Nayman, 1984
(25) peer support groups	Thon, 1984; Sewall, 1984
(26) support group for adult students	White, 1984
(27) counselors for younger and older students	Thon, 198
(28) activities for families	Thon, 1984

Special Programs

(1) career planning	Blanshan, Burns, & Geib, 1984; Thon, 1984
(2) enhancing study skills	Blanshan, Burns, & Geib, 1984
(3) test taking tactics	Blanshan, Burns, & Geib, 1984 Mulliken, 1985; Lamb-Porterfield, Jones, McDaniel, 1987; Rawlins &

	Lenihan, 1982
(4) job search strategies	Blanshan, Burns, & Geib, 1984; Mulliken, 1985; Lamb-Porterfield, Jones, McDaniel, 1987
(5) job market information	Mulliken, 1985
(6) time management	Blanshan, Burns, & Geib, 1984; Mulliken, 1985; Lamb-Porterfield, Jones, McDaniel, 1987; Wheaton & Robinson, 1983; Rawlins & Lenihan, 1982
(6) assertive communications	Lamb-Porterfield, Jones, McDaniel, 1987; Wheaton & Robinson, 1983; Rawlins & Lenihan, 1982
(7) being a single parent	Rawlins & Lenihan, 1982
(8) marriage enrichment	Rawlins & Lenihan, 1982
(9) couples communication	Rawlins & Lenihan, 1982
(10) home, campus, job conflicts	Rawlins & Lenihan, 1982
(11) study skills	Lamb-Porterfield, Jones, McDaniel, 1987
(12) improving physical health	Lamb-Porterfield, Jones, McDaniel, 1987
(13) stress management	Lamb-Porterfield, Jones, McDaniel, 1987; Wheaton & Robinson, 1983
(14) building self-confidence	Mulliken, 1985; Lamb-Porterfield, Jones, McDaniel, 1987
(15) career counseling	Bruce, Hart, & Sullivan, 1990; Lamb-Porterfield, Jones, McDaniel, 1987; Christian & Wilson, 1985; Slaney & Dickson, 1985; Hu, 1985; Mulliken, 1985; Thon, 1984
(16) individual needs assessment	Thon, 1984

(17) job placement assistance	Bruce, Hart, & Sullivan, 1990; Thon, 1984; Kasworm, 1980
(18) job hunting skills	Wheaton & Robinson, 1983
(19) personal counseling	Lamb-Porterfield, Jones, McDaniel, 1987; Blanshan, Burns, & Geib, 1984; Mulliken, 1985; Kasworm, 1980
(20) counseling for academic problems	Blanshan, Burns, & Geib, 1984; Mulliken, 1985; Hu, 1985; Burke, 1987
(23) marital counseling	Gilbert, 1982; Thon, 1984
(24) workshop on "transition to student status for adult"	Blanshan, Burns, & Geib, 1984
(25) math anxiety	Lamb-Porterfield, Jones, McDaniel, 1987; Blanshan, Burns, & Geib, 1984; Rawlins & Lenihan, 1982
(26) life planning workshops	Lamb-Porterfield, Jones, McDaniel, 1987; Smith & Regan, 1983
(27) enhancing self-esteem	Lamb-Porterfield, Jones, McDaniel, 1987; Spratt, 1984
(28) workshop on study skills	Mulliken, 1985; Wheaton & Robinson, 1983; Kasworm, 1980
(29) values clarification	Wheaton & Robinson, 1983
(30) family counseling	Blanshan, Burns, & Geib, 1984; Wheaton & Robinson, 1983; Gilbert, 1982
(31) counseling for financial problems	Lamb-Porterfield, Jones, McDaniel, 1987; Blanshan, Burns, & Geib, 1984; Mulliken, 1985
(32) counseling group for adult students	Wilcoxon, Wilcoxon, & Tingle, 1989; Mulliken, 1985; Pollard & Galliano, 1982

Faculty Services

(1) course assignments compatible with adult students' experience	Burke, 1987; Spratt, 1984; Bauer, 1981
(2) high quality professors	Hu, 1985
(3) flexible academic requirements	Hu, 1985; Burke, 1987
(4) flexible admission requirements	Hu, 1985; Burke, 1987; Shriberg, 1984; Bauer, 1981
(5) more evening classes	Bruce, Hart, & Sullivan, 1990; Hu, 1985; Lamb-Porterfield, Jones, McDaniel, 1987; Wheaton & Robinson, 1983; Terrell, 1990; Leach, 1984
(6) availability of weekend classes	Bruce, Hart, & Sullivan, 1990; Hu, 1985; Wheaton & Robinson, 1983; Terrell, 1990; Leach, 1984
(7) credit for life experiences	Mulliken, 1985
(8) assistance from academic advisor	Blanshan, Burns, & Geib, 1984; Wheaton & Robinson, 1983
(9) increased faculty awareness of student diversity	Richter-Anton, 1986; Mulliken, 1985; Rawlins, 1979
(10) more availability of faculty for advisement and consultation	Bruce, Hart, & Sullivan, 1990; Hu, 1985; Lamb-Porterfield, Jones, McDaniel, 1987; Bauer, 1981
(11) personal interest in students by faculty	Lamb-Porterfield, Jones, McDaniel, 1987
(12) additional course offerings related to women	Mulliken, 1985
(13) an opportunity to learn and develop friendships	Beer, 1989; Burke, 1987
(14) academic programs related to job market demands	Hu, 1985

Instrumental support (IS)	
(1) Kitchen cleanup	Huston-Hoburg & Strange, 1986; Berkove, 1979
(2) Preparing meals	Huston-Hoburg & Strange, 1986; Berkove, 1979
(3) Doing laundry	Huston-Hoburg & Strange, 1986; Berkove, 1979
(4) Cooking	Huston-Hoburg & Strange, 1986; Berkove, 1979
(5) Shopping for food	Huston-Hoburg & Strange, 1986; Berkove, 1979)
(6) Housecleaning	Huston-Hoburg & Strange, 1986; Berkove, 1979)
(7) Driving children	Huston-Hoburg & Strange, 1986; Berkove, 1979)
(8) Paying bills/checkbook	Huston-Hoburg & Strange, 1986; Berkove, 1979)
(9) Cooking	Huston-Hoburg & Strange, 1986; Berkove, 1979
(10) Minor household repair	Huston-Hoburg & Strange, 1986; Berkove, 1979
(11) Laundry	Huston-Hoburg & Strange, 1986; Berkove, 1979
(12) Grocery shopping	Huston-Hoburg & Strange, 1986; Berkove, 1979
(13) Lawncare	Huston-Hoburg & Strange, 1986; Berkove, 1979
(14) Trash disposal	Huston-Hoburg & Strange, 1986; Berkove, 1979
(15) Housecleaning	Huston-Hoburg & Strange, 1986; Berkove, 1979
(16) Car repairs	Huston-Hoburg & Strange, 1986; Berkove, 1979

(17) Contributing to family	Huston-Hoburg & Strange, 1986; Berkove, 1979
(18) Help with child care	Huston-Hoburg & Strange, 1986; Berkove, 1979
Sources of Role Strain (RS)	
(1) Insufficient time	Gerson, 1985
(2) Incompatible demands family, work, and school	Gerson, 1985
(3) Identity in question	Gerson, 1985
(4) Others' expectation excessive	Gerson, 1985
(5) Marital happiness	DeGroot, 1980
(6) Fatigue	Gerson, 1985
(7) Tense	Gerson, 1985
(9) Disordered life	Gerson, 1985
(10) Personal commitments unfilled	Gerson, 1985
(11) Unclear priorities	Gerson, 1985
(13) Excessively self-centered	Gerson, 1985
(14) Aware of personal relationships	Gerson, 1985
(15) Guilt	Gerson, 1985
(16) health	Van Meter & Agronow, 1982
(17) satisfaction with academic accomplishments	Van Meter & Agronow, 1982
(18) need for achievement	Van Meter & Agronow, 1982
(19) emotional support from spouse/significant other	Van Meter & Agronow, 1982
(20) emotional support from family	Van Meter & Agronow, 1982

(21) husband's attitude	Van Meter & Agronow, 1982
(22) husband's income	Van Meter & Agronow, 1982
(23) husband's education	Suitor, 1988
(24) marital satisfaction	Suitor, 1988
(25) age of child or children	Suitor, 1988
(26) number of children	Suitor, 1988
(27) satisfaction with child care	Suitor, 1988
(28) not enough time	Kirk & Dorfman, 1983
(29) performing multiple roles	Kirk & Dorfman, 1983
(30) finances	Kirk & Dorfman, 1983
(31) tests and grades	Kirk & Dorfman, 1983
(32) study skills and writing papers	Kirk & Dorfman, 1983
Perceived Emotional Support (ES)	
(1) Spouse	Novak & Thacker, 1991; Speer & Dorfman, 1986; DeGroot, 1980; Kirk & Dorfman, 1983; Huston-Hoberg & Strange, 1986
(2) Children	Novak & Thacker, 1991; Speer & Dorfman, 1986; Kirk & Dorfman, 1983; Huston-Hoberg & Strange, 1986
(3) Family	Read, Elliott, Escobar, & Slaney, 1988
(4) Parents	Huston-Hoberg & Strange, 1986
(5) Friends outside school	Novak & Thacker, 1991; Speer & Dorfman, 1986; Kirk & Dorfman, 1983; Huston-Hoberg & Strange, 1986

(6) Friends inside school	Novak & Thacker, 1991; Speer & Dorfman, 1986; Kirk & Dorfman, 1983; Huston-Hoberg & Strange, 1986
(7) Classmates	Novak & Thacker, 1991; Speer & Dorfman, 1986; Huston-Hoberg & Strange, 1986
(8) Faculty	Speer & Dorfman, 1986; Huston-Hoberg & Strange, 1986
(9) Academic advising	Speer & Dorfman, 1986
(10) Financial Aid	Speer & Dorfman, 1986; Huston-Hoberg & Strange, 1986
(11) Career Planning & Placement	Speer & Dorfman, 1986; Huston-Hoberg & Strange, 1986
(12) Employer	Speer & Dorfman, 1986
(13) Co-workers	Speer & Dorfman, 1986
(14) Student Services Staff	Kirk & Dorfman, 1983
(15) Peers	Hite, 1985

Appendix B
Undergraduate Female Student Survey

UNDERGRADUATE FEMALE STUDENT SURVEY

Department of Counseling and Educational Development
School of Education
The University of North Carolina at Greensboro

Fall, 1993

Undergraduate Female Student Survey

Dear Survey Participant:

Thank you for your willingness to participate in this study. This study is being conducted in conjunction with the Department of Counseling and Educational Development, School of Education, The University of North Carolina at Greensboro as part of the requirements for my doctoral dissertation. I am conducting this study to determine if the factors that influence the academic success of undergraduate female students differ with age.

Your selection for this study was based on a random sample of students which was conducted to ensure that we get information from the population representative in your institution. Participation such as yours will assure that all viewpoints are part of the conclusions and recommendations resulting from the study.

If the study is to be a success, I need your frank and honest answers. All individual responses will be anonymous (name not required) and confidential. Your responses will be combined with others so that no individual responses will be reported or made available to anyone. If you would like to receive of copy of the overall results of this survey, I will need a mailing address that you may put in the space provided below.

This survey should take about 45 minutes to complete. Again, the overall findings will be available to all interested participants.

I appreciate your assistance with this research.

Sincerely,

Henry A. Lewis
Doctoral

IMPORTANT!

In completing this survey, please circle the number of any item that you do not clearly understand. Feel free to write any comments beside the item.

Example:		Strongly D	Disagree	Neither Ag	Agree	Strongly A	Does Not
50. flexible admission requirements.....	50.	(1)	(2)	(3)	(4)	(5)	N/A
51. more evening classes.....	51.	(1)	(2)	(3)	(4)	(5)	N/A

Demographic Information

1. What is your age? _____

2. Current marital status?

_____ Single, never married
_____ Married
_____ Reside with significant other
_____ Separated or divorced
_____ Widowed

3. Current student status?

_____ Part-time
_____ Full-time

4. At what stage are you in your program?

_____ Undergraduate - first year
_____ Undergraduate - second year
_____ Undergraduate - third year
_____ Undergraduate - fourth year
_____ Other (Please specify) _____

5. Current parental status?

_____ No children
_____ Parent with dependent children
(Please indicate ages: _____)
_____ Adult children not dependent on me

6. Type of child care currently using?

_____ None
_____ Private day care
_____ Pay a babysitter
_____ Friends or relatives
_____ Spouse/significant other
_____ Other (Please specify) _____

7. Current work status?

_____ Not currently employed
_____ Employed as a full-time homemaker
_____ Employed full-time outside the home
_____ Employed part-time outside the home
_____ Other (Please specify) _____

Directions: For statements 1 through 24 in Section I, please mark the number that best corresponds with your level of agreement with the statement using the scale from 1 to 5 where 1 indicates "Strongly Disagree" and 5 indicates "Strongly Agree". If the statement does not apply to you, please mark N/A for "Does Not Apply".

Section I: Reasons for Attending College

Reasons that I am presently attending school are . . .

		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Does Not Apply
1. to enhance my present career/job	1.	(1)	(2)	(3)	(4)	(5)	N/A
2. to prepare myself for a new career/job	2.	(1)	(2)	(3)	(4)	(5)	N/A
3. because of dissatisfaction with my present job	3.	(1)	(2)	(3)	(4)	(5)	N/A
4. to prepare myself to reenter a previous career or to get back into the job market	4.	(1)	(2)	(3)	(4)	(5)	N/A
5. for self-exploration (i.e., the opportunity to explore myself and find out who I really am)	5.	(1)	(2)	(3)	(4)	(5)	N/A
6. for self-fulfillment (i.e., as a way to give some meaning and purpose to my life)	6.	(1)	(2)	(3)	(4)	(5)	N/A
7. to raise my family's standard and/or style of living	7.	(1)	(2)	(3)	(4)	(5)	N/A
8. because of a recent significant change in my life (i.e., a divorce or separation, the death of a spouse, the birth of a child, etc.)	8.	(1)	(2)	(3)	(4)	(5)	N/A
9. to share what I learn by helping others	9.	(1)	(2)	(3)	(4)	(5)	N/A
10. to meet new people	10.	(1)	(2)	(3)	(4)	(5)	N/A
11. because my employer wanted me to go	11.	(1)	(2)	(3)	(4)	(5)	N/A
12. to gain a new perspective on my marital relationship	12.	(1)	(2)	(3)	(4)	(5)	N/A
13. because my spouse or significant other encouraged me to attend	13.	(1)	(2)	(3)	(4)	(5)	N/A
14. because friends or others encouraged me to attend	14.	(1)	(2)	(3)	(4)	(5)	N/A
15. to enhance my economic/financial status	15.	(1)	(2)	(3)	(4)	(5)	N/A
16. because of the reputation of my academic program	16.	(1)	(2)	(3)	(4)	(5)	N/A
17. because of the content of my academic program	17.	(1)	(2)	(3)	(4)	(5)	N/A
18. because I now have more free time than I had before	18.	(1)	(2)	(3)	(4)	(5)	N/A
19. because I needed to test my ability to do college-level work	19.	(1)	(2)	(3)	(4)	(5)	N/A
20. to make more friends	20.	(1)	(2)	(3)	(4)	(5)	N/A
21. to get away from my daily routine	21.	(1)	(2)	(3)	(4)	(5)	N/A
22. because of dissatisfaction at home	22.	(1)	(2)	(3)	(4)	(5)	N/A
23. for the satisfaction of just getting a degree	23.	(1)	(2)	(3)	(4)	(5)	N/A
24. just for more education or knowledge	24.	(1)	(2)	(3)	(4)	(5)	N/A

Directions: For statements 1 through 45 in Section II, please mark the number that best corresponds with your level of agreement with the statement using the scale from 1 to 5 where 1 indicates "Strongly Disagree" and 5 indicates "Strongly Agree". *If the statement does not apply to you, please mark N/A for "Does Not Apply".*

Section II: Problems and Barriers

Problems or barriers that I have encountered while attending school are...

		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Does Not Apply
1. the financial costs of education (i.e., tuition, fees, books, etc.)	1.	(1)	(2)	(3)	(4)	(5)	N/A
2. the attendance requirements	2.	(1)	(2)	(3)	(4)	(5)	N/A
3. other economic concerns such as a decrease in my income	3.	(1)	(2)	(3)	(4)	(5)	N/A
4. the lack of financial aid I have been able to get	4.	(1)	(2)	(3)	(4)	(5)	N/A
5. that my program timetable is too demanding	5.	(1)	(2)	(3)	(4)	(5)	N/A
6. my fear that I'm too old to compete with younger students	6.	(1)	(2)	(3)	(4)	(5)	N/A
7. a lack of acceptance by other students	7.	(1)	(2)	(3)	(4)	(5)	N/A
8. that I don't enjoy studying	8.	(1)	(2)	(3)	(4)	(5)	N/A
9. balancing job responsibilities and time for study	9.	(1)	(2)	(3)	(4)	(5)	N/A
10. balancing home responsibilites and time for study	10.	(1)	(2)	(3)	(4)	(5)	N/A
11. class scheduling conflicts with job	11.	(1)	(2)	(3)	(4)	(5)	N/A
12. class scheduling conflicts with home responsibilities	12.	(1)	(2)	(3)	(4)	(5)	N/A
13. class scheduling conflicts with family (i.e., spouse and children)	13.	(1)	(2)	(3)	(4)	(5)	N/A
14. having enough time for the significant people in my life	14.	(1)	(2)	(3)	(4)	(5)	N/A
15. having enough time for myself	15.	(1)	(2)	(3)	(4)	(5)	N/A
16. incidents of racial discrimination	16.	(1)	(2)	(3)	(4)	(5)	N/A
17. incidents of sexual harassment	17.	(1)	(2)	(3)	(4)	(5)	N/A
18. the lack of opportunity to socialize with other students who are like me	18.	(1)	(2)	(3)	(4)	(5)	N/A
19. difficulty with finding household help	19.	(1)	(2)	(3)	(4)	(5)	N/A
20. a change in job for my sporse or significant other	20.	(1)	(2)	(3)	(4)	(5)	N/A
21. lack of acceptance by faculty	21.	(1)	(2)	(3)	(4)	(5)	N/A
22. lack of support from family	22.	(1)	(2)	(3)	(4)	(5)	N/A
23. lack of support from spouse or significant other	23.	(1)	(2)	(3)	(4)	(5)	N/A
24. lack of support from employer	24.	(1)	(2)	(3)	(4)	(5)	N/A

Section II: Problems and Barriers (Continued)

Problems or barriers that I have encountered while attending school are...

		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Does Not Apply
25. lack of support from friends	25.	(1)	(2)	(3)	(4)	(5)	N/A
26. lack of support from parents	26.	(1)	(2)	(3)	(4)	(5)	N/A
27. unreliable child care or a lack of child care	27.	(1)	(2)	(3)	(4)	(5)	N/A
28. the pressure to excel academically (i.e., to get high grades)	28.	(1)	(2)	(3)	(4)	(5)	N/A
29. my lack of specific skills or abilities for academic work	29.	(1)	(2)	(3)	(4)	(5)	N/A
30. frustrating experiences with institutional "red tape"	30.	(1)	(2)	(3)	(4)	(5)	N/A
31. the inaccessibility of information regarding campus resources	31.	(1)	(2)	(3)	(4)	(5)	N/A
32. my lack of physical energy	32.	(1)	(2)	(3)	(4)	(5)	N/A
33. the challenge of learning new computer skills	33.	(1)	(2)	(3)	(4)	(5)	N/A
34. the need to be more assertive	34.	(1)	(2)	(3)	(4)	(5)	N/A
35. unreliable transportation to the campus or other commuting problems	35.	(1)	(2)	(3)	(4)	(5)	N/A
36. concern about personal safety on the campus	36.	(1)	(2)	(3)	(4)	(5)	N/A
37. my feelings of guilt about leaving my family	37.	(1)	(2)	(3)	(4)	(5)	N/A
38. the standardized tests required for admission	38.	(1)	(2)	(3)	(4)	(5)	N/A
39. the courses I want are not scheduled when I can attend	39.	(1)	(2)	(3)	(4)	(5)	N/A
40. my fear of academic failure	40.	(1)	(2)	(3)	(4)	(5)	N/A
41. my fear that no one will hire me after graduation because of my age	41.	(1)	(2)	(3)	(4)	(5)	N/A
42. I have no place to study	42.	(1)	(2)	(3)	(4)	(5)	N/A
43. I'm not sure what I want to learn and eventually do	43.	(1)	(2)	(3)	(4)	(5)	N/A
44. the length of time out of school between high school and college	44.	(1)	(2)	(3)	(4)	(5)	N/A
45. my lack of confidence in my abilities	45.	(1)	(2)	(3)	(4)	(5)	N/A

PLEASE GO TO PAGE 4

Directions: For statements 1 through 24 in Section III, please mark the number that best corresponds with your level of agreement with the statement using the scale from 1 to 5 where 1 indicates "Strongly Disagree" and 5 indicates "Strongly Agree". If the statement does not apply to you, please mark N/A for "Does Not Apply".

Section III: Student Support Services

Support services for students that are important to me are . . .

		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Does Not Apply
1. a family orientation program	1.	(1)	(2)	(3)	(4)	(5)	N/A
2. campus orientation programs for students of all ages	2.	(1)	(2)	(3)	(4)	(5)	N/A
3. community programs explaining what the institution has to offer	3.	(1)	(2)	(3)	(4)	(5)	N/A
4. on-campus employment opportunities	4.	(1)	(2)	(3)	(4)	(5)	N/A
5. financial aid information	5.	(1)	(2)	(3)	(4)	(5)	N/A
6. accessible parking facilities	6.	(1)	(2)	(3)	(4)	(5)	N/A
7. carpool information and referral system	7.	(1)	(2)	(3)	(4)	(5)	N/A
8. a parent locator telephone number so that students' children could reach their parents at school in an emergency	8.	(1)	(2)	(3)	(4)	(5)	N/A
9. both day and evening childcare	9.	(1)	(2)	(3)	(4)	(5)	N/A
10. childcare information	10.	(1)	(2)	(3)	(4)	(5)	N/A
11. both on- and off-campus housing information for students of all ages	11.	(1)	(2)	(3)	(4)	(5)	N/A
12. increased awarenesness of students by student organizations (i.e., the student government, student newspaper, sororities and fraternities, etc.)	12.	(1)	(2)	(3)	(4)	(5)	N/A
13. a place to socialize with students of similar age	13.	(1)	(2)	(3)	(4)	(5)	N/A
14. phone-in registration	14.	(1)	(2)	(3)	(4)	(5)	N/A
15. evening and weekend registration	15.	(1)	(2)	(3)	(4)	(5)	N/A
16. evening and weekend bookstore hours	16.	(1)	(2)	(3)	(4)	(5)	N/A
17. evening and weekend student health facility hours	17.	(1)	(2)	(3)	(4)	(5)	N/A
18. flexible tuition payment arrangements	18.	(1)	(2)	(3)	(4)	(5)	N/A
19. multiple food service options	19.	(1)	(2)	(3)	(4)	(5)	N/A
20. exercise and wellness facilities	20.	(1)	(2)	(3)	(4)	(5)	N/A
21. religious center	21.	(1)	(2)	(3)	(4)	(5)	N/A
22. optional health and activity fees	22.	(1)	(2)	(3)	(4)	(5)	N/A
23. student resources center	23.	(1)	(2)	(3)	(4)	(5)	N/A
24. activities for families	24.	(1)	(2)	(3)	(4)	(5)	N/A

Section III: Student Support Services (Continued)

Support services for students that are important to me are . . .

		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Does Not Apply
25. career planning services	25.	(1)	(2)	(3)	(4)	(5)	N/A
26. workshop on study skills	26.	(1)	(2)	(3)	(4)	(5)	N/A
27. test taking strategies	27.	(1)	(2)	(3)	(4)	(5)	N/A
28. job search strategies	28.	(1)	(2)	(3)	(4)	(5)	N/A
29. job placement assistance	29.	(1)	(2)	(3)	(4)	(5)	N/A
30. job market information	30.	(1)	(2)	(3)	(4)	(5)	N/A
31. time/stress management	31.	(1)	(2)	(3)	(4)	(5)	N/A
32. assertive communication training	32.	(1)	(2)	(3)	(4)	(5)	N/A
33. workshops on being a single parent	33.	(1)	(2)	(3)	(4)	(5)	N/A
34. marriage enrichment programs	34.	(1)	(2)	(3)	(4)	(5)	N/A
35. couples communication workshops	35.	(1)	(2)	(3)	(4)	(5)	N/A
36. programs on home/campus/job conflicts	36.	(1)	(2)	(3)	(4)	(5)	N/A
37. programs for improving physical health	37.	(1)	(2)	(3)	(4)	(5)	N/A
38. programs for building self-confidence/self-esteem	38.	(1)	(2)	(3)	(4)	(5)	N/A
39. personal counseling	39.	(1)	(2)	(3)	(4)	(5)	N/A
40. counseling for academic problems	40.	(1)	(2)	(3)	(4)	(5)	N/A
41. workshops on the "transition to student status" for adults	41.	(1)	(2)	(3)	(4)	(5)	N/A
42. workshops on overcoming math anxiety	42.	(1)	(2)	(3)	(4)	(5)	N/A
43. life planning workshops	43.	(1)	(2)	(3)	(4)	(5)	N/A
44. workshops on values clarification	44.	(1)	(2)	(3)	(4)	(5)	N/A
45. family counseling	45.	(1)	(2)	(3)	(4)	(5)	N/A
46. counseling for financial problems	46.	(1)	(2)	(3)	(4)	(5)	N/A
47. course assignments that are compatible with students' experience	47.	(1)	(2)	(3)	(4)	(5)	N/A
48. high quality professors	48.	(1)	(2)	(3)	(4)	(5)	N/A
49. flexible academic requirements	49.	(1)	(2)	(3)	(4)	(5)	N/A

Section III: Student Support Services (Continued)

Support services for students that are important to me are . . .

		Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Does Not Apply
50. flexible admission requirements	50.	(1)	(2)	(3)	(4)	(5)	N/A
51. more evening classes	51.	(1)	(2)	(3)	(4)	(5)	N/A
52. availability of weekend classes	52.	(1)	(2)	(3)	(4)	(5)	N/A
53. availability of credit for life experiences	53.	(1)	(2)	(3)	(4)	(5)	N/A
54. increased faculty awareness of student diversity	54.	(1)	(2)	(3)	(4)	(5)	N/A
55. increased availability of faculty for advisement and consultation	55.	(1)	(2)	(3)	(4)	(5)	N/A
56. increased personal interest in students by faculty	56.	(1)	(2)	(3)	(4)	(5)	N/A
57. additional course offerings related to women	57.	(1)	(2)	(3)	(4)	(5)	N/A
58. academic programs related to job market demands	58.	(1)	(2)	(3)	(4)	(5)	N/A

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Directions: For statements 1 through 10 in Section IV, please mark the number that best corresponds with your level of agreement with the statement using the scale from 1 to 5 where 1 indicates "Very Unsupportive" and 5 indicates "Very Supportive". If the statement does not apply to you, please mark N/A for "Does Not Apply".

Section IV: Emotional Support

While you are attending school, how supportive of your efforts are each of the following people?

		Very Unsupportive	Unsupportive	Neutral	Supportive	Very Supportive	Does not apply
1. Your spouse or significant other	1.	(1)	(2)	(3)	(4)	(5)	N/A
2. Your children	2.	(1)	(2)	(3)	(4)	(5)	N/A
3. Your parents	3.	(1)	(2)	(3)	(4)	(5)	N/A
4. Other family members	4.	(1)	(2)	(3)	(4)	(5)	N/A
5. Your friends outside school	5.	(1)	(2)	(3)	(4)	(5)	N/A
6. Other students inside school	6.	(1)	(2)	(3)	(4)	(5)	N/A
7. Your employer	7.	(1)	(2)	(3)	(4)	(5)	N/A
8. Your co-workers	8.	(1)	(2)	(3)	(4)	(5)	N/A
9. Your faculty advisor	9.	(1)	(2)	(3)	(4)	(5)	N/A
10. Other departmental faculty	10.	(1)	(2)	(3)	(4)	(5)	N/A

PLEASE GO TO PAGE 8

Directions: This section lists sources of role strain frequently reported by women in higher education that are the result of filling multiple roles (i.e., spouse or significant other/parent/employee/student). For statements 1 through 26 in Section V, please mark the number that best describes the degree of role strain you experience while in school that is the result of each source of strain using the scale from 1 to 5 where 1 indicates **"Never a source of strain for me"** and 5 indicates **"Always a source of strain for me"**. If the statement does not apply to you, please mark N/A for **"Does Not Apply to me"**.

Section V: Sources of Role Strain

While I am in school, a source of role strain for me is ...

		Never a source of strain for me.	Rarely a source of strain for me.	Sometimes a source of strain for me.	Usually a source of strain for me.	Always a source of strain for me.	Does not apply to me.
1. not having enough time for all that I have to do	1.	(1)	(2)	(3)	(4)	(5)	N/A
2. incompatible demands from my family, work, and school	2.	(1)	(2)	(3)	(4)	(5)	N/A
3. questions about my identity	3.	(1)	(2)	(3)	(4)	(5)	N/A
4. others' expectations of me	4.	(1)	(2)	(3)	(4)	(5)	N/A
5. physical fatigue	5.	(1)	(2)	(3)	(4)	(5)	N/A
6. emotional tension or stress	6.	(1)	(2)	(3)	(4)	(5)	N/A
7. that my life is too disordered	7.	(1)	(2)	(3)	(4)	(5)	N/A
8. my personal commitments that go unfulfilled	8.	(1)	(2)	(3)	(4)	(5)	N/A
9. unclear priorities	9.	(1)	(2)	(3)	(4)	(5)	N/A
10. that I feel excessively self-centered	10.	(1)	(2)	(3)	(4)	(5)	N/A
11. that I am aware of personal relationships	11.	(1)	(2)	(3)	(4)	(5)	N/A
12. that I feel guilty	12.	(1)	(2)	(3)	(4)	(5)	N/A
13. my health	13.	(1)	(2)	(3)	(4)	(5)	N/A
14. that I am dissatisfied with my academic accomplishments	14.	(1)	(2)	(3)	(4)	(5)	N/A
15. my need for achievement	15.	(1)	(2)	(3)	(4)	(5)	N/A
16. my husband's/significant other's attitude	16.	(1)	(2)	(3)	(4)	(5)	N/A
17. my husband's/significant other's income	17.	(1)	(2)	(3)	(4)	(5)	N/A
18. my husband's/significant other's education	18.	(1)	(2)	(3)	(4)	(5)	N/A
19. my level of marital satisfaction	19.	(1)	(2)	(3)	(4)	(5)	N/A
20. the age(s) of my child(ren)	20.	(1)	(2)	(3)	(4)	(5)	N/A
21. the number of children I have	21.	(1)	(2)	(3)	(4)	(5)	N/A
22. my satisfaction with my childcare arrangements	22.	(1)	(2)	(3)	(4)	(5)	N/A
23. having to perform multiple roles	23.	(1)	(2)	(3)	(4)	(5)	N/A

Section V: Sources of Role Strain (Continued)

While I am in school, a source of role strain for me is . . .

		Never a source of strain for me.	Rarely a source of strain for me.	Sometimes a source of strain for me.	Usually a source of strain for me.	Always a source of strain for me.	Does not apply to me.
24. having to take tests and grades	24.	(1)	(2)	(3)	(4)	(5)	N/A
25. my personal finances	25.	(1)	(2)	(3)	(4)	(5)	N/A
26. my study skills and having to write papers	26.	(1)	(2)	(3)	(4)	(5)	N/A

PLEASE GO TO PAGE 10

PLEASE COMPLETE THIS SECTION ONLY IF YOU RESIDE WITH A SPOUSE OR SIGNIFICANT OTHER.

Directions: For statements 1 through 13 in Section VI, please mark the number that best corresponds with your level of agreement with the statement using the following scale: 1 indicates **"I have complete responsibility"**, 2 indicates **"My spouse or significant other and I share this responsibility"**, and 3 indicates **"My spouse or significant other has complete responsibility"**. If the statement does not apply to you, please mark N/A for **"Does Not Apply"**.

Section VI: Instrumental Support

While you are attending school, who in your household assumes greater responsibility for . . .

		I have complete responsibility.	My spouse or significant other and I share this responsibility.	My spouse or significant other has complete responsibility.	Does not apply to me.
1.	house cleaning	(1)	(2)	(3)	NA
2.	preparing meals	(1)	(2)	(3)	NA
3.	kitchen cleanup	(1)	(2)	(3)	NA
4.	shopping for food	(1)	(2)	(3)	NA
5.	doing laundry	(1)	(2)	(3)	NA
6.	driving children	(1)	(2)	(3)	NA
7.	minor household repairs	(1)	(2)	(3)	NA
8.	lawncare	(1)	(2)	(3)	NA
9.	trash disposal	(1)	(2)	(3)	NA
10.	car repairs	(1)	(2)	(3)	NA
11.	paying bills/keeping the checkbook	(1)	(2)	(3)	NA
12.	contributing to the family income	(1)	(2)	(3)	NA
13.	routine childcare	(1)	(2)	(3)	NA

THANK YOU FOR COMPLETING THIS SURVEY!

Please Return To:

Mr. Henry A Lewis, Doctoral Candidate
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Appendix C
Confirmatory Factor Analysis of UFSS

Rotation Method: Varimax

Rotated Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6
RANEW1	.	.	.	.	.	.
RANEW2	.	.	.	.	0.45481	.
RANEW3	.	.	.	.	.	.
RANEW4	-0.31129	.	.	.	0.44634	.
RANEW5	.	.	.	.	.	.
RANEW6	.	.	.	.	.	0.32690
RANEW7	.	.	.	.	.	.
RANEW8	.	.	.	.	.	.
RANEW9	.	.	.	.	.	.
RANEW10	.	.	.	.	.	.
RANEW11	.	.	.	.	.	0.30337
RANEW12	-0.50910	.	.	.	0.55870	.
RANEW13	-0.44602	.	0.41642	.	.	.
RANEW14	.	.	.	.	.	0.40413
RANEW15	.	.	.	.	.	0.43406
RANEW16	.	.	.	.	.	.
RANEW17	.	.	.	.	.	0.35414
RANEW18	.	.	.	.	.	0.34484
RANEW19	.	.	.	.	.	.
RANEW20	0.32126	.	.	.	.	0.44277
RANEW21	.	.	.	.	.	0.42420
RANEW22	.	.	.	.	.	0.45217
RANEW23	.	.	.	.	.	0.39135
RANEW24	.	.	.	.	.	.
PBNEW1	.	.	.	.	.	.
PBNEW2	.	0.34764	.	.	0.36005	.
PBNEW3	.	.	.	.	.	.
PBNEW4	.	.	.	.	0.32653	.
PBNEW5	.	0.50285	.	.	.	.
PBNEW6	-0.34851	.	0.34128	.	.	.
PBNEW7	.	0.34279	.	.	.	.
PBNEW8	.	0.42597	.	.	.	.
PBNEW9	.	.	.	.	.	.
PBNEW10	-0.47286	.	0.43139	.	0.77521	.
PBNEW11	.	.	.	.	0.34019	.
PBNEW12	-0.46421	.	.	.	0.77956	.
PBNEW13	-0.47162	.	0.52329	.	.	.
PBNEW14	.	.	0.62802	.	.	.
PBNEW15	.	0.40512	0.35971	.	.	.
PBNEW16	.	0.56340	.	.	.	.
PBNEW17	.	.	.	.	.	.
PBNEW18	.	.	.	.	.	0.32047
PBNEW19	.	.	.	.	.	0.35952
PBNEW20	.	.	0.51877	.	.	.
PBNEW21	.	.	.	.	.	.
PBNEW22	.	.	.	.	.	0.37672
PBNEW23	-0.30686	.	0.35922	.	.	.
PBNEW24	.	.	0.37102	.	.	.
PBNEW25	.	.	.	.	.	0.34726
PBNEW26	.	0.38660	.	.	0.65736	.
PBNEW27	.	.	.	.	.	.
	.	.	0.74599	.	.	.

Rotation Method: Varimax

Rotated Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6
PBNEW28		0.63243				
PBNEW29		0.43306				
PBNEW30		0.30188				
PBNEW31		0.41288				
PBNEW32		0.59192				
PBNEW33						
PBNEW34		0.54918				
PBNEW35						0.31083
PBNEW36		0.30223				
PBNEW37			0.56671			
PBNEW38						
PBNEW39			0.39343			0.40840
PBNEW40		0.66890			0.42035	
PBNEW41		0.34230				
PBNEW42		0.40692				
PBNEW43		0.32861				
PBNEW44	-0.30349					
PBNEW45		0.64353				
SSNEW1						
SSNEW2						0.42034
SSNEW3						
SSNEW4	0.31436			0.41581		
SSNEW5				0.39496		
SSNEW6				0.33775		
SSNEW7						
SSNEW8						
SSNEW9			0.65004			
SSNEW10			0.73268			
SSNEW11	0.44462		0.71936			
SSNEW12				0.31207		
SSNEW13				0.48770		
SSNEW14				0.46872		
SSNEW15					0.36349	
SSNEW16				0.30425	0.43092	
SSNEW17	0.37809				0.42401	
SSNEW18				0.35085		
SSNEW19	0.39627			0.37966		
SSNEW20				0.34698		
SSNEW21				0.44602		
SSNEW22				0.43511		
SSNEW23						
SSNEW24				0.47013		
SSNEW25			0.49629			
SSNEW26				0.52884		
SSNEW27				0.63070		
SSNEW28				0.63006		
SSNEW29				0.58788		
SSNEW30				0.54943		
SSNEW31				0.41492		
SSNEW32				0.66183		
SSNEW33				0.70702		
			0.52198			

Rotation Method: Varimax

Rotated Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6
SSNEW34	-0.39669		0.52036			
SSNEW35			0.40972			
SSNEW36			0.35616	0.42798	0.32027	
SSNEW37				0.50848		
SSNEW38		0.31627		0.68045		
SSNEW39				0.65564		
SSNEW40				0.54799		
SSNEW41			0.35862	0.30657		
SSNEW42				0.46303		
SSNEW43				0.61713		
SSNEW44				0.62794		
SSNEW45			0.45433	0.30111		
SSNEW46				0.48218		
SSNEW47				0.48134		
SSNEW48						
SSNEW49						
SSNEW50						
SSNEW51					0.41712	
SSNEW52			0.30007	0.33914	0.44364	
SSNEW53						
SSNEW54				0.34710		
SSNEW55				0.45390		
SSNEW56				0.36791		
SSNEW57				0.54376		
SSNEW58				0.46899		
ESNEW1	-0.44795					
ESNEW2	-0.42761					0.31397
ESNEW3			0.62083			
ESNEW4						0.37098
ESNEW5			-0.31233			
ESNEW6						
ESNEW7						
ESNEW8					0.68771	
ESNEW9					0.70983	
ESNEW10						
RSNEW1						
RSNEW2		0.59339				
RSNEW3		0.34626	0.35496			
RSNEW4		0.58480				
RSNEW5		0.66352				
RSNEW6		0.56955				
RSNEW7		0.61689				
RSNEW8		0.67043				
RSNEW9		0.67443				
RSNEW10		0.57927				
RSNEW11		0.47030				
RSNEW12		0.56153				
RSNEW13		0.57268				
RSNEW14		0.55428				
RSNEW15		0.54938				
RSNEW16	-0.41230	0.55545	0.36138			0.36679

Rotation Method: Varimax

Rotated Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6
RSNEW17	-0.44976	.	.	.	.	0.31231
RSNEW18	-0.34864	.	.	.	.	0.42486
RSNEW19	-0.43144	.	0.58095	.	.	.
RSNEW20	.	.	0.81441	.	.	.
RSNEW21	.	.	0.77823	.	.	.
RSNEW22	.	.	0.74822	.	.	.
RSNEW23	-0.40571	0.33467	0.47122	.	.	.
RSNEW24	.	0.60362	.	.	.	.
RSNEW25	.	0.35479	.	.	0.32161	.
RSNEW26	.	0.49990	.	.	.	.
ISNEW1	0.85473	.	.	.	.	.
ISNEW2	0.84772	.	.	.	.	.
ISNEW3	0.85823	.	.	.	.	.
ISNEW4	0.83301	.	.	.	.	.
ISNEW5	0.80776	.	.	.	.	.
ISNEW6	0.42635	.	-0.58683	.	.	.
ISNEW7	0.73908	.	.	.	.	.
ISNEW8	0.65920	.	.	.	.	.
ISNEW9	0.72891	.	.	.	.	.
ISNEW10	0.67958	.	.	.	.	.
ISNEW11	0.74127	.	.	.	.	.
ISNEW12	0.70132	.	.	.	.	.
ISNEW13	0.41008	.	-0.59169	.	.	.

NOTE: Values less than 0.29999 have been printed as '.'.

Variance explained by each factor

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6
12.913355	12.365500	12.309191	11.589677	7.219838	6.281153

Appendix D
Copy of Mailed Letter Requesting Participation

Henry A. Lewis, Doctoral Candidate
Department of Counseling and Educational Development
School of Education
The University of North Carolina at Greensboro
P. O. Box 5503
Greensboro, NC 27435

September 30, 1993

Dear Survey Participant:

I am a doctoral candidate in the Department of Counseling and Educational Development, School of Education, The University of North Carolina at Greensboro. As part of my work at the University, I am conducting a study to determine if the factors that influence the academic success of undergraduate female students differ with age.

Your selection in this study was based on a random sample of students conducted to ensure that the gathering of information is representative from your institution. Your participation will assure that all viewpoints are part of the conclusions and recommendations resulting from the study.

I invite your participation and request that you return the enclosed postcard. I would appreciate receiving the postcard by Friday, October 7. Upon receiving the postcard, I will mail a survey to you that will take about 20 minutes to complete along with a postage paid (free) envelope.

All individual responses will be anonymous (name not required) and confidential. If you would like to receive a copy of the results, I will need a mailing address that you may complete in a space provided on the survey.

I appreciate your assistance with this research.

Sincerely,

Henry A. Lewis

Appendix E
Postcard

Mr. Henry A. Lewis, Doctoral Candidate
Department of Counseling and Educational Development
School of Education
The University of North Carolina at Greensboro
P.O. Box 5503
Greensboro, NC 27435

Undergraduate Female Student Survey

☐ YES, I am interested in participating in your study. Please send me a questionnaire at the address listed below:

Please...

If any of the information listed on the address label is incorrect, please use the space provided below to help us update our records.

_____

_____

_____

☐ NO, I am unable to participate in your study at this time.

Thank you for returning this postcard!

Appendix F
Letter Accompanying Survey

Henry A. Lewis, Doctoral Candidate
Department of Counseling and Educational Development
School of Education
The University of North Carolina at Greensboro (UNCG)
P. O. Box 5503
Greensboro, NC 27435

Date

Dear

Thank you for your willingness to complete the attached Undergraduate Female Student Survey. This research will help UNCG better address the needs of female undergraduate students. Please return the survey to me by Monday, November 1, or at your earliest convenience. A postage paid return envelope is included for your use.

If you would like to have a copy of the results of this research, please write your name and address on the inside cover of the survey.

Again, I appreciate your willingness to help with my research.

Sincerely,

Henry A. Lewis

Enclosures