ANXIETY AMONG TRADITIONAL AND NONTRADITIONAL POSTSECONDARY ACADEMIC STUDENTS

By

NELDA ANN BRAY

Bachelor of Science
University of Tulsa
Tulsa, Oklahoma
1982

Master of Science
Northeastern State University
Tahlequah, Oklahoma
1984

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Thesis Approved:

Ray D. Sanders

Thesis Adviser

Clyde B Knight

Imogene Lord

Gary R. Bice

Thomas C. Collins

Dean of Graduate College

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CHAPTER I

INTRODUCTION

Throughout the history of higher education, colleges have had to face dramatic shifts in the makeup of the learning population. Are they appropriately prepared for the influx of nontraditional students? Is there an understanding of the barriers and needs involved? Are workable academic methods being integrated in order to assist a wide-ranged age group of today's enrollment seeking education? Are individuals being encouraged or discouraged when attempting to reach their goals through institutions that are not seriously addressing the attrition rate?

Demographics of student populations enrolled at postsecondary academic institutions across the nation have been changing rapidly. The number of postsecondary students and their gender and age are, in large part, reflecting trends in American society as a whole. In 1970, 52% of the population was less than 29 years old (Holtzclaw, 1980). Some researchers have forecast that by 2000 the median age will be 35 years or older (Holtzclaw, 1980; Rauch, 1981; Shannon, 1986). Rauch said that by 2030, the median age will be 37.3 years. This figure compares to a median age of 30 in 1986 (Shannon, 1986). The new median age will be 8.4 years more than it was in 1981 (Rauch).

The aging trends are resulting from a declining death rate, declining birth rate, and aging of the baby boom population that followed the end of World War II (Cahill & Salomone, 1987; Hodgkinson, 1983; Rauch, 1981). The fastest growing segment of the American population is the 35 to 44 year old group (Hodgkinson, 1983; Shannon, 1986). In 1985, 20% of the population was 55 years or older (Cross, 1988); however, Shannon (1986) contended that 20% of Americans were 65 years or older only 1 year later.

Age trends have a definite impact on postsecondary education enrollments. Some enrollment forecasters (e.g. Lonabocker & Halfond, 1984) have said that the number of 18 year olds will have declined by 26% from 1979 to 1994. This percentage represents a loss of 1.1 million prospective postsecondary students. By 1992, the under 25 year old age group was predicted to equal 51% of total college enrollment. This figure was 61% in 1982 (Shannon, 1986). Griff (1987) and Hughes (1983) said that over 33% of college students were over 25 years of age, which means the once typical 18 to 22 year old full-time resident is no longer the norm. He also said that by 2000 there will be more than 20 million adult students. According to Shannon, the more traditional college age population had declined 22% on a national scale by 1986.

The national trend, which has resulted in fewer high school graduates, will not affect all states in a similar manner (Western Interstate Commission for Higher Education, 1988; hereinafter referred to as WICHE). For example, California and Arizona are expected to experience large increases, whereas Idaho, Montana,

Oregon, and Wyoming are predicted to have fewer graduates in 2004 than in 1986.

Recent past and present economies in the United States have stimulated an increasing number of adults, primarily women, to seek formal education and employment. In 1980, 78% of all men and 50% of all women were employed, with women forming 42% of the total labor force (Farmer, 1985). Women represented about 44% of the labor force in 1983 (Seaward & Redmann, 1987). According to Kolde (1985), approximately 51 million women were in the labor force in 1985. This figure represented 54.5% of all women 16 years or older. The Department of Labor has estimated that 6 of 10 women will be working by 1995 (Kolde). Gerstein, Lichtman, and Barokas (1988) maintained that 80% of working-age women are expected to be in the labor force by 1995. To effectively compete for jobs, people need to be adequately educated.

For many adults the return to the classroom is a necessary step enabling them to receive retraining because they need to replace obsolescent job skills with competitive ones (Aslanian & Brickell, 1987). For some adults the formal educational experience will be their first since leaving high school. Making the transition from the home or job to a formal educational environment can be difficult for many people, and can present obstacles not ordinarily encountered by younger students, such as having less time to attend school. Postsecondary education participants are becoming older, increasingly female, and more part time (O'Connor & Aasheim, 1985; Cross, 1988).

Problem Statement

Many problems faced by adult students can be precipitated by high levels of anxiety (Gerson, 1985). Also, gender roles, with attendant pressures and expectations, can have a significant impact on anxiety (Antonucci & Akiyama, 1987), academic performance (Moulton, 1980), and occupational selection (Yount, 1986). Carson and Johnson (1985) stated that adults can experience failure and social conflicts if they do not receive appropriate assistance within educational settings.

Appropriate aid cannot be adequately provided to traditional or nontraditional students without a basic understanding of some of the characteristic differences between the two student populations. The problem focuses on the fact that there is a large dropout rate in schools, and no one seems to know why. This research study proposes to determine whether there are selected variable differences among traditional and nontraditional postsecondary academic students. This study sought answers to the following six research questions:

1. Is there a difference in mean anxiety between traditional students and nontraditional students?

2. Is there a difference in mean anxiety between male students and female students?

3. Is there a difference in mean anxiety between male nontraditional students and female nontraditional students?

4. Is there a difference in mean anxiety between male traditional students and female traditional students?

5. Is there a difference in mean anxiety between female traditional students and female nontraditional students?

6. Is there a difference in mean anxiety between male traditional students and male nontraditional students?

Purpose of the Study

The purpose of this research is to examine the variable of anxiety among traditional and nontraditional postsecondary academic students. This study will be worthwhile if it provides possible solutions for improvement of student retention. A similar study was previously researched (Couture, 1989), from the University of Montana, when self-esteem and anxiety comparisons among vocational-technical students attending Missoula Vocational Technical Center in Montana was examined.

One researcher (Hutchinson, 1988) predicted that by 2000 the same number of college students will be enrolled as there were in 1978. Throughout the 1980's the competitive struggle to attract students has been a difficult one for most postsecondary educational institutions (Chadwick & Ward, 1987; Shannon, 1986). For many years these institutions have systematically planned programs and services for traditional students, but this population has begun to dwindle because the number of recent high school graduates has declined (Franklin & Goldman, 1987). College officials have indicated the importance to their campuses of reaching out to nontraditional students because colleges and universities compete for student enrollment. Other postsecondary schools, such as junior and

community colleges and state vocational technical centers, compete for many of the same students being recruited by colleges and universities.

As college budgets and enrollments decline, the design of appropriate programs and services to attract and keep older students is becoming more important (Rawlins & Lenihan, 1982). Hughes (1983) and Rauch (1981) believed that if colleges expect to stay in business they need to prepare for an adult population whose educational needs are different than those of traditional college students. There are some people (e.g. Harrington & Sum, 1988) who disagree with the projected dire college enrollment figures. According to them, the enrollment crisis has failed to materialize.

Many forecasters believe that postsecondary enrollment trends are evolving from full-time traditional students to part-time reentry adult students, and that educational missions of college must change in order to improve their student retention rates (Alfred, 1985; Altmaier & McNabb, 1984; Tinto & Wallace, 1986). According to Billison & Terry (1987), Franklin and Goldman (1987), Harris and Anttonen (1986), Roueche, Appel, and Mink (1977), Shannon (1986), and Weiss and Bryden (1986-1987), one of the biggest problems facing colleges is the student dropout rate. Holtzclaw (1980) believed that frequently counselors, instructors, and other educational personnel interact inappropriately with adult students because they have been used to interacting with 18 to 22 year old students. Reece (1985) agreed that colleges are ignoring, for the most part, adult learners.

Usually, retention is based on students' success rates (Weiss & Bryden, 1986-1987). Retention rates must be improved for traditional and nontraditional students if declining enrollment is to be effectively combatted. Fifty percent of freshmen enrolled at 4 year colleges and universities; and 80% of freshmen enrolled at 2 year colleges drop out (Franklin & Goldman, 1987). Most jobs do not require a college degree. Also, more older, part-time, women, married, minority and evening students attend 2 year rather than 4 year colleges (Engleberg, 1982).

Research suggests that changes in traditional programs have been rather modest. The commission's survey showed that 67% of the programs classified as "nontraditional" were nontraditional in the sense that they utilized off-campus locations; 57% used nontraditional methods; and 48% offered nontraditional content. In the words of the investigators Ruyle & Geiselman (1974), the nontraditional programs in existence in 1972 "more often constituted new ways of teaching old subjects to new students rather than new subjects as such."

The best answer to the charge that institutions of higher education are opportunists, looking for a new clientele to replace the old, is that with the notable exception of evening colleges and extension divisions, traditional colleges paid little attention to lifelong learning until quite recently (Cross, 1988). The fact that lifelong learning movement is of considerable financial importance to colleges does not in itself, however, constitute a valid criticism.

Most colleges are seriously interested in serving adult learning needs, and many are working hard to conduct "needs assessments" in order to determine what programs are of interest to the potential adult clientele, and it is fairly clear that, in the highly competitive buyer's market of the 1990's, "colleges that place institutional needs above those of the adults they are trying to attract will probably lose out in the long run" (Cross, 1988).

The viability of colleges across the nation is based, in part then, on student recruitment and retention. If center personnel do not understand their students's needs and characteristics, increasing student enrollment and retention will be difficult, at best. Numerous educational reports and research findings indicated that colleges and universities, vocational technical centers, and junior and community colleges have failed to adequately respond to adult needs (Reece, 1985). If the needs of nontraditional and traditional students alike are not identified, programs and services can be planned inappropriately, wasting valuable resources of the schools and, perhaps, leading to increased student attrition (Couture, 1989).

If anxiety is a construct that can have a significant effect on a student's success or failure rate, as suggested by Hetherington and Hudson (1981), appropriate treatments can be explored and implemented. Hodgkinson (1983) reported that community colleges have been able to capture a higher proportion of nontraditional students because community colleges have been more willing to address the needs of adult students. For example, intervention

programs have been effectively designed to assist many reentry women to become more assertive, to improve their self-esteem, and to abate anxiety (Hetherington and Hudson, 1981). According to Rawlins and Lenihan (1982) many older students need individual assistance to raise their levels of self-esteem and confidence. Low self-esteem and self-acceptance is often accompanied by the mistaken belief that one is in some way incompetent and does not measure up to others. When present, this belief can be a major source of anxiety (Wheeler, 1965). People often feel miserable and second-rate because they habitually compare themselves to others. Underlying this tendency is the mistaken belief that worth is determined by achievement. As everyone knows by now, problems regarding student recruitment and retention that overlap with one's self-image cannot be easily solved. Therefore, the focus of this study shall strive to recognize the broad task in effectively implementing lifelong learning to a confused and apprehensive society.

Scope and Limitations

Within the North Central educational accreditation association, there are currently 357 public two-year community colleges. It is the largest of the accreditation regions, and comprises 19 states. All data from participating institutions will be combined, regardless of the institution's size. The study is not designed to discriminate possible differences in one's choice to enroll in an institution due to the school's census capacity, location or environmental conditions.

In addition, this study did not determine whether a traditional or nontraditional student is attending school on a part-time or on a full-time basis.

Definitions of Terms

Adult in transition. See nontraditional student.

Adult learner. See nontraditional student.

Adult student. See nontraditional student.

Andragogy. The art and science of helping adults learn (Knowles, 1970).

Anxiety. A normal response to a perceived threat; an unpleasant emotional state in which a present or continuing strong desire or drive seems likely to miss its goal (English & English, 1958).

College. A generic term to include 2 and 4 year colleges and universities, community colleges, and vocational technical schools. Junior and community colleges, and 4 year colleges and universities, and vocational technical institutions began reporting enrollment data to the National Center for Education Statistics via the Integrated Postsecondary Education Data System (Aslanian & Brickell, 1987; Couture, 1989). Much of the statistics reflecting college enrollment is based on these data. Many researchers have not separated the various school enrollments when reporting figures and enrollment trends. For clarity and consistency, the term college will be used in a generic sense to describe all aforementioned educational institutions unless noted otherwise in specific sections of this study.

Dislocated worker. A person whose job has been phased out (Greenwood, 1987).

Displaced homemaker. A person who has not worked in the labor force for many years; instead, the person has performed unpaid services for family members. In addition, the person is unemployed or underemployed. Finally, the person has lost the income normally relied on for survival (Shaw, 1979).

Female stereotyped occupation. See female traditional occupation.

Female traditional occupation. An occupation in which jobs are usually performed by females.

Lifelong learning. Learning on the part of people of all ages and from all walks of life using the multiple learning resources of society to learn whatever they wanted or needed to know.

Male stereotyped occupation. See male traditional occupation.

Male traditional occupation. An occupation in which jobs are usually performed by males.

Mature student. See nontraditional student.

Nontraditional job. A job in which one gender comprises 25% or less of the total number of workers (Hagerty, 1985).

Nontraditional occupation selection. Persons choosing an opposite gender-dominant field (Harren, 1979).

Nontraditional student. For purposes of this study, a nontraditional student is an undergraduate student who is over 25 years of age.

Older student. See nontraditional student.

Pedagogy. The art and science of teaching children (Cross, 1988).

Postsecondary. A formal educational environment at a level beyond high school. For purposes of this study, it is limited to academic junior community colleges.

Reentry student. See nontraditional student.

Returning student. See nontraditional student.

Self-concept. The totality of individuals' thoughts and feelings having reference to themselves as objects (Rosenberg, 1979). Also, people's perceptions of themselves and the world (Gadzella & Williamson, 1984a). Also, their views of themselves; the fullest descriptions of themselves of which they are capable at any given time (English & English, 1958).

State anxiety. Transitory anxiety; it varies in intensity and fluctuates over time (O'Neil, Spielberger & Hansen, 1969).

Stress. A theoretical construct (Wills & Langner, 1980). Also, a force applied to a system sufficient to cause strain or distortion in the system, or when very great, to alter it into a new form (English & English, 1958).

Traditional occupation selection. Men choosing a male-dominant field and women choosing a female-dominant field (Harren, 1979).

Traditional student. An undergraduate student who falls in the age range of 18 to 25.

Trait anxiety. Individual differences in anxiety proneness. It is a relatively stable personality trait (O'Neil et al., 1969).

Vocational technical education. Postsecondary education of a vocational nature received at vocational technical schools and some community colleges.

Younger student. See traditional student.

CHAPTER II

REVIEW OF LITERATURE

The review of related literature for this study is covered under the following divisions:

- school enrollment and employment trends
- characteristics of traditional and nontraditional students
- gender roles and career aspirations
- anxiety and stress
- anxiety and academic performance
- gender and anxiety
- anxiety intervention

School Enrollment and Employment Trends

The number of new high school graduates is expected to lower levels during the next 16 years (Hodgkinson, 1983). On a national scale the number of new high school graduates reached an apex in the late 1970's (WICHE, 1988). This period was followed by a steady downward spiral that continued through 1986, at which time the trend was again reversed. WICHE indicated that the gain was expected to be modest through 1988; but, beginning in 1989, the number of new high school graduates decreased rapidly to a relatively low level and has remained there. The decrease from 1989-1992 was approximately 12%. Beginning in 1995, the level has been predicted

to rise slowly and the 1988 level should be reached by 1998 (WICHE). Hodgkinson expected a sixteen year decline to reverse itself beginning in 1988. According to WICHE, by 2004 the number of new high school graduates has been projected to be 5.2% more than the 1988 total.

The number of college students less than twenty-five years of age increased 15% between 1970-1985. During this same time the number of students twenty-five years or older increased more than 114% (Digest of Educational Statistics, 1987; hereinafter referred to as DES). Between 1980-1985, the number of more traditional college age students increased 5%, whereas the number of adult learners increased 12% (DES). Adult learners total 45% of all college students (Aslanian & Brickell, 1988). Holtzclaw (1980) estimated that between 17 million to 32 million adults annually participate in some type of educational activity. These figures represent a population that is approximately 2 to 3 times as large as the total number of college registrants enrolled for course credit.

Hetherington and Hudson (1981) estimated that for every 50 adults, 1 adult aged 35 or older is returning to the classroom. The article "Forecast Shift in Numbers for New Graduates" (1988; hereinafter referred to as College Board), cited that 6 million adults enroll annually for college credit; 75 percent of them are between 25 - 40 years, and more than 50% are women (Aslanian & Brickell, 1988; Hetherington & Hudson, 1981). By 2000, 52% of all undergraduates will be women; also, 50% of all undergraduates will be 22 years or older (Heretick & Doyle, 1983). Hruby (1985)

found that 43% of college students are over the age of 25.

According to Aslanian and Brickell (1988), persons between 25 - 34 years make up 56% of adult learners. Twenty-seven percent of these learners are between 35 - 44 years, 12% are between 45 - 54, 4% are between 55 - 64 years, and only 1% are 65 years or older. Forty-five percent of total college enrollment is represented by adult learners (College Board, 1988). This percentage is expected to rise to 50% during the 1990's. These figures are significant because the percentage of new high school graduates was expected to fall by 12% thru 1994 and remain at low levels for an additional 10 years (College Board).

Additional demographic data describing adult students have been gathered by Aslanian and Brickell (1988). Approximately 60% of adult students are married and 15% of them were previously married. Fifteen percent of women adult learners are divorced, compared to 5% of male adult learners. Approximately 90% of adult learners are white and the majority are employed. Male adult learners are younger than female adult learners.

Seventy percent of women in the age group 20 - 24, 68% of women in the age group 25 - 29, and 66% of women in the age group 30 - 34 were employed (Kolde, 1985). Kolde said that the majority of working women are employed for economic reasons. Forty percent of mothers of preschool children were employed in 1980; this was up from 20% in 1965 (Farmer, 1985). Part of the economic need has been attributed to divorce and separation (Farmer, 1985; Hoffman, 1988; Johnson, 1988; Kolde, 1985).

Farmer (1985) also reported that 45% of the women in the labor force were single heads of household. In 1986, 10,211,000 families were maintained by women without the presence of husbands. This figure represents a 41% increase over 1975 when 7,242,000 families were maintained by women without the presence of husbands (Johnson, 1988). In addition, Johnson found that during 1986, in families maintained by women without the presence of husbands, 6,832,000 were maintained by women 35 years or older. This figure compares to 4,884,000 in 1975, an increase of 40%.

Forty-seven percent of the families maintained by women are below the poverty level (Hagerty, 1985). Hoffman (1988) said that although the number of divorces in 1986 totaled more 1,159,000, the lowest rate since 1975, the divorce rate was 48% of the marriage rate, meaning that for every two marriages there was about one divorce. According to Grella (1987), many divorced women are forced to remain financially dependent on their ex-husbands or state welfare. These women experience a significant decrease in their standard of living and must redefine themselves in the context of the larger society. For many, the only way they can improve their standard of living is through further education.

Also, the traditional wife and mother role is evolving for many women as they broaden their career role expectations (Gerstein et al., 1988). Many women work because Title IX of the Education Amendments of 1972 and the recent women's movement have given them support to seek competitive and satisfying careers (Kolde, 1985; Vetter & Hickey, 1985).

Characteristics of Traditional and Nontraditional Students

Postsecondary schools have usually relied on traditional students enrolled in full-time programs. This enrollment pattern has changed to a great degree. The traditional student population is being replaced by early retirees, adult learners, displaced homemakers, reentry students, dislocated workers, and other types of nontraditional students. Other terms commonly used to describe nontraditional students are stopouts, older students, and returning students (Hughes, 1983). Registration and enrollment practices, faculty advisement, and curricula must be adapted to meet the needs of the evolving populace. These students need more individual attention (Goldman, 1988; Weiss & Bryden, 1986-1987).

Nontraditional students are not campus focused, prefer an informal learning environment, and have multiple commitments. Traditional students have fewer commitments, are campus focused, and prefer a formal learning environment (Hughes, 1983). Although the most common definition of nontraditional student is an undergraduate student, 25 years or older, disagreement between research authors, scarcity of literature and considerable disparity does abound when an attempt to define this category is related to one's age.

In the opinion of Warchal and Southern (1986), traditional students are in their late teens or early 20's and participate in postsecondary education as a natural educational development stage. Holtzclaw (1980) stated that, for the most part, traditional students are continuing their educational journey, going from high

school into a community college, vocational institution or four year college or university. Their journey is usually a preplanned event to prepare them for a job, further schooling, career, or the adult world.

The situation for many adults is different. Adults enroll in postsecondary education because they are experiencing some type of conflict in their lives. If educational institutions fail to consider these adult needs, such as more academic remediation (Solomon & Gordon, 1981), the adult attrition rate will be high (Bean & Metzner, 1985; Holtzclaw, 1980). Traditional college enrollment has been declining since the 1960's, but nontraditional college enrollment has been on the rise (Martin, 1988b), so it is of great importance that college personnel learn more about adult student characteristics if these students are to be retained (Ross, 1988; Cross, 1988).

A study by Radcliffe et al. (1986) found that students aged 20 or less comprised 25% of total college enrollment. They further contended that the 21-30 age group of students has been increasing while the 31-40 age group of students has been declining.

Ross (1988) said that by 1990, students who are 25 or older would make up 47% of college enrollment, with women accounting for most of the nontraditional student growth. Over the past 10 years, college enrollment of women 25 or older increased 10 times (Clayton & Smith, 1987). Ross noted that these students need services designed specifically for them, apart from those normally designed for students 18-22 years.

Reisman and Zemmin (1983) found that much of the increase in student enrollment at 2 year colleges is attributable to nontraditional students, such as reentry housewives, midcareer changers, and adults in need of skill improvement or new occupational skills. More and more of these students desire part-time programs offered during evening hours and are campus commuters (Cross, 1988; Long, 1985; Reisman and Zemmin, 1983; Weiss & Bryden, 1986-1987). Lifelong learning has become very important in American society. Cross estimated that one in three adults annually participate in some type of organized instruction.

People are healthier and living longer. By 2020 it has been estimated that 33% of Americans will be over 55 years of age (Redmond, 1986). He also said the number of older students will have a marked impact on vocational school enrollment. Terry (1985) concurred. More pressure will be placed on older workers to remain in the work force to relieve pressure on Social Security and other retirement programs. To remain in the work force, many older workers will be required to return to the classroom for upgrading or retraining to adequately prepare for new job market demands (Terry, 1985; Redmond, 1986).

Most nontraditional students are women (Hruby, 1985; Warchal & Southern, 1986). The average reentry woman is 34 years old; women like her make up approximately 20% of college enrollment (Roy, 1986). But McCrea (1979) said the typical reentry woman is 30 years old, married, and has one child. Her study indicated that 66% of women reentry students have children at home and are turning to

college primarily for economic reasons.

Reentry women are more career oriented than are younger women students. Swift, Colvin, and Mills (1987) contended that the average reentry college female is in her early 30's, returning to college after caring for a family for several years, married, frequently employed at a professional or technical level, seeking to obtain a better job, and has a husband who is employed and well educated. The authors failed to specify where they obtained their information. Clayton and Smith (1987) conducted a study that implied research studies which indicate reentry women return to school primarily for self-fulfillment are questionable. They found that vocational motives frequently are cited as the major reason for classroom return.

Displaced homemakers comprise a significant category of nontraditional students. They are defined as persons 27 years or older, unemployed or underemployed, once primarily homemakers, experiencing difficulty finding employment, and who have lost the financial support of a spouse through death, divorce, or separation; most of them are divorced (Swift et al., 1987). They are a rapidly growing segment of American society. In one study of reentry women (Mackinnon-Slaney et al., 1988), divorced women were found to head many households and finding it necessary to return to school for training so they could provide for their families. For these women the decision to return to the classroom was a matter of economics. The study also found that, when compared to married women, divorced women reported they received less family support when they returned to college.

Most studies of nontraditional students have focused on women, but an increasing number of male nontraditional students are returning to the classroom. In a study conducted by Brown and Robinson (1988), the typical reentry male was discovered to be married, employed full-time, enrolled part-time, and between 25 - 32 years. Many men in the study said that their major reason for returning to school was some sort of major life event, such as a physical injury.

A rapidly growing segment of male nontraditional students consist of dislocated workers. Many jobs previously held by dislocated workers were highly paid jobs in the manufacturing industry that were quickly phased out by technological advances (Greenwood, 1987). Dislocated workers must learn to make the transition to other careers, many of which mandate a significant amount of new training, often accompanied by lower wages (Greenwood).

Students of different ages have different needs. In a 1986 research study by Okun et al., sleeping habit changes, eating habit changes, minor law violations, address changes, breaking off a relationship with a boyfriend or girlfriend, death of a close relative, and failing a test or course were the most frequently cited problems of traditional students. Nontraditional students experienced more difficulty with in-law relationships and increased marital arguments. Also, nontraditional students were able to spend less time on campus than traditional students.

Traditional and nontraditional students differ in many other

aspects as well. Traditional students tend to be single with no dependents (Iovacchini et al., 1985). They are also more likely to live closer to school, attend day classes, and to be employed part-time (Mardoyan et al., 1983). Smith (1979), however, said nontraditional students tend to live closer to campus than traditional students.

Younger students experience some unique problems not ordinarily associated with older students. A study conducted by Hoffman (1984) indicated, in part, that for younger college students (late adolescents), increased emotional independence from both parents was positively correlated with fewer academic problems. This relationship held true for both genders. The study also found that younger students who experienced greater conflict with the process of separating psychologically from their parents were more apt to enjoy less academic success.

In a similar study (Lopez, Campbell, & Watkins, 1986), young men were found to be more independent of parents than were young women. For young women students, a negative relationship between increased separation from parents and lower college adjustment existed although the separation had a positive impact on the young women's emotional well-being. The study implied that psychological separation of young male students from their parents does not have a noticeable effect at this stage in their lives.

A study conducted by Farmer (1985) discovered that adolescents experience less dependence on their parents commensurate with adolescents' increase in age. Sullivan and Sullivan (1980) found

that young male college students (late adolescents) who boarded on campus exhibited more affection for parents than young male students who boarded in the family home. Traditional students viewed external factors as being less of a problem in goal achievement than did nontraditional students (Shannon, 1986). Shannon also discovered that a greater number of traditional students viewed intellectual growth and job enhancement as less important than did nontraditional students. Recreational programs, facilities, activities, and social programs were less important to nontraditional students.

Nontraditional students frequently feel out of place in a postsecondary school atmosphere where they are surrounded by younger students (Mardoyan et al., 1983). According to Young (1984), nontraditional students have multiple commitments, are not campus focused, and prefer informal learning. Nontraditional students perceive on-campus child care as more important than do traditional students and on-campus housing as being less important than do traditional students. Also, nontraditional students are more apt to consider the effects of employment and family responsibilities on their course loads than are traditional students (Shannon, 1986).

Some of the barriers faced by reentry students are family responsibilities, career goal indecision, lack of adequate financing, time constraints, poor study habits, fear of change, multiple roles pressure, lack of self-discipline, distance from educational facility, coordination of child care, and making job schedules fit school schedules (Altmaier & McNabb, 1984; Pollard &

Galliano, 1982). Franek (1985) indicated that time management is of great importance to reentry women as is the need to balance the maintenance of caring relationships with individual achievement. School officials need to become more concerned regarding campus life adjustment of older students (Peabody & Sedlacek, 1982). A major concern of older students is their treatment by younger students. Generally, younger students exhibit more negative attitudes toward older students, especially in a social context, but they are less negative in academic situations. The study did not define age categories.

Ashmore (1987) and Courage (1984) found that adult learners are less available, more independent, more motivated, less flexible, more responsible, more experienced, more pragmatic, more diverse, more learning focused and potentially more insecure than are traditional learners. In addition, adult students exhibit lower abstract reasoning, higher knowledge, lower short-term memory, higher long-term memory, and lower complex data organization (Ashmore, 1987).

A study conducted by Sewall (1984b) discovered several reasons why nontraditional students return to a formal educational environment: to learn, to develop a new career, to earn a degree, to achieve independence, and to advance in a career are some of the reasons given. Epstein (1987) and Governanti and Clowes (1982) found that traditional and nontraditional students voiced similar reasons for becoming college students.

Research seemed to indicate that the most successful programs

designed to assist female traditional students are those that address topics such as sex-role socialization, dating relationships, and combining career and family, self-concept and self-esteem (Keller & Rogers, 1983). They said this is in contrast to the major problem faced by female nontraditional students, which is usually that of satisfying family and educational demands, simultaneously.

Writing skills of nontraditional students are similar to those of traditional students, but their math skills are less developed according to a study by Sewall (1984). In Sewall's study, nontraditional students rank higher in vocabulary and reading rate skills than traditional students. Reading comprehension levels are similar for both groups. Fadale and Winter (1978) believed that many nontraditional students need instruction in basic skill areas if they are to be successful in their selected career fields.

Not only are there differences between traditional and nontraditional student needs and characteristics, there are differences between genders. Many reentry students, especially women, feel guilty because they believe they are taking money away from their children or spouses (Grottkau & Davis, 1987; Lance et al., 1979). Lance et al. also reported that reentry women express more problems than reentry men. Reentry women are more apt to feel guilty about spending family money, are more fearful of memory loss, experience greater conflicts with spouses and friends because of reentry, and feel more guilt because they are striving to attain personal goals. Both genders reported a fear of failure and concern regarding time management.

A study of adult undergraduate college students (DeGroot, 1980) indicated that males and females are affected differently by the college experience. The study found that male adult students are slightly better prepared academically to attend college. In addition, the study by DeGroot implied that adult male students are more assertive than their female counterparts but that adult women students' assertiveness levels increased on the basis of college attendance. Adult male students, according to the study, received more support from their spouses than was received by women adult students.

Harris and Anttonen (1986) contended that they found major differences between men and women college students. The authors said women students have greater personal and emotional needs than men students and women have greater needs than men in all areas where both sexes exhibit needs. The authors did not, however, specify what those needs were.

Some controversy exists as to what type of teaching style is more effective when applied to traditional and nontraditional learners. Lam (1985) and Rauch (1981) believed that adult learners perform best when they are provided an opportunity to participate in the educational process and when informal teaching methods are based on class discussions. Burnham (1985) believed that colleges are unprepared to adequately address the needs of adult learners, and that the traditional pedagogical teaching approach with mature students is not effective. Some authors are of the opinion that andragogy, the art and science of helping adults learn, is a more

appropriate and effective teaching style for many adult learners (Ashmore, 1987; Burnham, 1985; Davenport & Davenport, 1986b; Lam, 1985; Rauch, 1981).

The term andragogy, coined by Alexander Kapp, originated in Germany and was introduced in the United States in 1927. Malcolm Knowles has been given the credit for applying andragogy in America. The concept took hold in 1968 (Davenport & Davenport, 1986b). The term is contrasted with pedagogy, the art and science of teaching children (Kazemek & Rigg, 1983). Andragogy is based on an instructional environment that is informal, mutually respective, and collaborative. Group discussion, role playing, field work, and laboratory applications are teaching methods employed with this teaching approach (Davenport & Davenport, 1986b). The study provided evidence that females prefer andragogical methods more than males, but the differences between the genders was not large. However, no correlation was discovered to exist between age and educational orientation. Adult educators are cautioned to be aware of both types of teaching styles because if andragogical methods are overlooked, some adult learners may not progress as they should academically (Davenport & Davenport, 1986a; Engleberg, 1982).

Adults prefer services that provide easy registration, ample parking, financial aid, employment assistance, academic and career counseling, and course work that can be applied to practical situations (College Board, 1988). How students adjust initially to their academic environment is predictive of later successful or unsuccessful coping behavior (Baker & Siryk, 1984). Frequently, how

students initially adjust to a postsecondary education environment depends, in large part, on how they view themselves and how they feel about these perceptions.

Hameister and Hickey (1977) state that traditional students depend more heavily on their families and educational institutions to formulate decisions in contrast to nontraditional students who usually rely more on themselves to make decisions. Learning that is more student-centered rather than institution-centered is more appropriate for nontraditional students. In the opinion of the study's authors, traditional students adjust more quickly to new learning situations than do nontraditional students.

Gender Roles and Career Aspirations

Males and females differ in their views regarding development of occupational status (Rosenberg & Rosenberg, 1981). Young girls have higher career aspirations than young boys, but this relationship changes as boys and girls mature. As they age, boys aspire to higher level occupations than those to which girls aspire; the occupational aspiration levels of girls decline as they get older. Forty-one percent of all males 16 years or older aspire to a major profession, compared to only 6% of all females in the same age bracket. Women are attracted to female-traditional occupations. This is because gender role stereotyping has taken place in our society.

According to Erdwins et al. (1983), women of different ages ascribe masculine gender role traits to themselves differently.

Women most apt to assign masculine traits to themselves are in their 30's. Women in their 20's and 30's are more apt to rate themselves as less dependable, less conscientious, less self-controlled, less inhibited, less thoughtful, and more impulsive. Also, their need for affiliation with others was rated low. Older women rated themselves at the opposite end of the continuous in each of these areas. They viewed themselves as less masculine, more responsible, self-controlled, and afflitative. The authors of the study believed that some researchers have viewed these nontraditional self-perceptions as a shift away from traditional gender role stereotypes due to societal role pressures. Women presently in their 30's and 40's matured during the years when gender roles were liberalized in American society.

Follett, Andberg, and Hendel (1982), on the basis of a study of 238 veterinary students, reported a number of gender differences regarding perceptions of the college environment by men and women students. Significant differences were found in some areas. The men students generally stereotyped women students as being more timid and squeamish than did the women students themselves. The men students wanted females to be more feminine than did the women students. Fifty percent of the women students and 30% of the men students believed sex discrimination existed on campus, mainly to the disadvantage of women students. The men students viewed their competitiveness higher than the women students viewed their own competitiveness.

Holsinger and Chapman (1984) reported that students who opted

to attend two year colleges declined in their career aspirations more than those who selected four year colleges in which to enroll.

Moore, in a 1987 study, found that individual students who tend to make the most successful life adjustments away from parents are those who are more independent. These students generally accept responsibility for personal decisions, are aware of their freedom on choice, and are more apt to express positive feelings regarding parental relations. Moore also found how late adolescents perceive parental separation has impacted their development. In this study, both genders ranked self-governance as the most important aspect of parental separation, but females perceived it to be more important than did males.

Koplik and DeVito (1986) did a research study of problems experienced by college students in 1976 and 1986. Students in 1976 experienced less anxiety than did students in 1986. Students in 1986 were more concerned with weight control, sleeping habits, exercise, and sunshine. Gender differences were noted in the study. Women in both groups were more concerned with the feeling of fatigue than were men. More women than men expressed concern about weight control and lack of exercise in the 1986 group. Both genders in 1986 expressed greater concern regarding financial problems and personal appearance. Men in both groups felt more insecure when making dates than did the women. Women felt more inferior in 1986 and in 1976. More men wanted to be popular in 1986 than did women. Both genders exhibited increased laziness and anxiety in 1986. In 1986, women reported less self-confidence than men. Also, both

genders reported increased frequency of sickness and greater parental sacrifice than their 1976 cohorts. Students in 1986 were more troubled over moral issues than were the 1976 students. Finally, the 1986 students were more concerned about school failure and tended to worry more about future success.

One's gender role is directly related to one's self-concept. Many of today's working-age women were raised in a society that taught them the home was their place, a place to cook the meals and take care of the children. During the same period, boys were taught to be self-sufficient and to strive for achievement in order to develop self-worth. Girls were taught to develop successful relationships with others (primarily males) and, then, husbands (Knapp, 1981).

Knapp (1981) writes that the creation of many serious mental health problems can be attributed to the formation of gender role stereotypes. She believed that dependency of females has resulted from their conditioning by society. This dependency has led to internalized feelings of low self-esteem by countless women. Such women experience difficulty when attempting to formulate decisions. They experience guilt, alienation, and depression. Knapp cautioned people to remember that gender roles are learned and are not biological or natural.

Cross gender majors are those majors or educational programs traditionally dominated by the opposite gender. In some instances, decisions to enroll in cross-gender programs are affected by a student's gender role concept (Rea & Strange, 1983). This

conclusion was based on a study of male and female cross-gender majors. The study indicated that the largest proportion of females who enrolled in the same-gender majors reported feminine gender role concept and the largest percentage of females who enrolled in cross-gender majors reported masculine gender role concept. This trend did not apply to the male students who participated in the study.

Gender role stereotypes have been created by the division of labor according to Yount (1986). In her view, division of labor is the concept used to describe enforced segregation of the work force based on gender. Personality traits have been associated with particular occupations and have been generalized and defined as masculine or feminine. This segregation of the work force is, in part, a major contributing factor in the formation of men's and women's self-concepts. An example, according to Young, is that homemakers describe themselves as dependent, whereas persons employed in more physical occupations perceive themselves as independent. Homemakers have described themselves as nurturing, contrasted to physical workers who generally see themselves as dominant, forceful, and aggressive. These differences in gender role personality traits are strongly related to self-concept and mostly disappear when comparing men and women in similar occupations.

A study conducted in 1985 by Houser and Garvey found that women who selected nontraditional (male dominated) educational programs received more support from female and male friends, relatives,

teachers, and counselors than women who selected traditional (female dominated) programs. The authors defined nontraditional programs as those whose male enrollment equaled 80% or more of total program enrollment. Women students enrolled in male dominated programs were rated high in masculinity and lower in femininity using the Bem Sex-Role Inventory than were women students enrolled in female dominated programs.

According to Wheaton and Robinson (1983), reentry women experience problems such as anxiety, guilt, lack of financial aid, and lack of self-confidence. Research studies conducted by Schiedel and Marcia (1985) and Wyly (1987) also support the notion that self-concept and self-esteem have a major impact on career development, career decision making, and are very much related to gender roles. The inclusion of self-esteem is apparent in most theories of vocational development; but, according to Forrest and Mikolaitis (1986), many of these theories do not adequately address male and female differences, or the effects of these differences on vocational development. A major difference is the importance of the relational component when a male or female is defining the self in relation to theirs (Forest & Mikolaitis, 1986; Knapp, 1981). Women tend to describe themselves in terms of their relations or connections with others, whereas men tend to identify themselves in terms of separateness from others.

All researchers do not fully agree that these gender role tendencies play a major part in career selection. Stafford (1984) reported that women's attitudes toward sex role stereotypes in the

occupational; realm do not affect working women's self-esteems. In other words, no significant difference in self-esteem was found when traditional homemakers and nontraditional career women were compared to homemakers with nontraditional views and career women with traditional beliefs.

Programs to date which have been designed to affect career decisions of reentry women have met with little success; most of the effort expended to encourage reentry women to consider non-traditional careers have been futile (Slaney & Dickson, 1985). Some studies tend to dispute the findings of Slaney & Dickson. For example, Martin (1983) referred to women nontraditional students as adults in transition. He found that many reentry women are forced into a transitory state by unforeseen life traumas, such as divorce or loss of income. The findings implied that some reentry women, with appropriate encouragement and support, do select nontraditional careers. A study by Robbins (1987) supported, in part, the findings of Martin. People who experience difficulty formulating career decisions may possess a low self-image, and a high level of anxiety. These persons may benefit from personal counseling before career counseling can be meaningful.

In the area of support, Huston-Hoburg and Strange (1986) did a study in which they found that women usually are more supportive of their husbands' school reentry than men of their wives' reentry. Women receive most of their support from friends. Family and friends exert much influence on women's occupational decision making (Thomas, Christie, Colvin, Denbroeder, 1979). Many women are

reluctant to enter male traditional programs because they are afraid of being called masculine; they don't want to threaten their relationships with men.

The federal government has passed several statutes in attempts to encourage enrollment in nontraditional educational programs and occupations. Prior to the passage of Title IX of the Education Amendments of 1972, females could be and often were prohibited from participating in some programs solely on the basis of their gender (Vetter & Hickey, 1986). Women primarily were enrolled in homemaking, health, and office occupations (Couture, 1989).

Title II of the Education Amendments of 1976 prohibits sex discrimination, sex bias, and sex stereotyping in all vocational technical education programs (Vetter et al., 1979). According to the federal government, sex bias and stereotyping are major problems in education. A proportion of the funding provided by the Carl Perkins Vocational Education Act of 1984 has been set aside to combat the problem (Seaward & Redmann, 1987). Today, women are making inroads into programs which previously were considered traditionally male, but the advance has been slow.

Many displaced homemakers lack appropriate training, job experience, and self-confidence. Many reentry women initially attend educational programs with preconceived ideas, oftentimes considering only female stereotyped occupations. They need support, counseling, and encouragement to explore higher paying male stereotyped careers (Wiberg & Mayor, 1985).

At least one major study indicated that more women are

increasingly turning to professional and managerial careers (Gerstein et al., 1988). Decreasing female participation has been noted in teaching, sales, service, and clerical occupations. These researchers reported that the number of men intending to pursue professional and managerial careers fell 3%. Although gender representation in the work force is changing, most female dominant and male dominant occupations still are problematical.

A study conducted by Vetter and Hickey (1985) provided findings that the national picture has changed. Agricultural, technical, trade, and industry programs boast increased female enrollment. Data processing and police science are the two technical programs showing the greatest increase. Conversely, traditional female stereotyped occupational home economics and office occupations programs have experienced increases in male enrollment.

There is no simple connection between employment and self-fulfillment. This theory is based on findings from a study by Pietromonaco, Manis, and Markus (1987). They reported that only in women who perceive paid employment to be a meaningful part of their lives is self-esteem found to be enhanced and anxiety is lowered.

The relationships of men and women to work and family are vastly different today, compared to the recent past. Today, men and women can expect to change jobs several times and to share family responsibilities. Changing responsibilities have affected all walks of life (Thompson & Bitters, 1985).

Men and women are treated differently in the work force. Women earn 60% of what men earn. In general, men high school graduates

earn more than women college graduates. Few job requirements are related to gender, but society has determined men's and women's jobs based on tradition rather than content. At some point in their lives, 9 of 10 women will be employed. Women are entering nontraditional occupations at a faster rate than are men (Kolde, 1985). By 1979, approximately 66% of the women employed in the American work force were single, widowed, divorced, separated or married to men who earned very low wages (Fralick, 1983-1984).

For economic reasons many reentry women are considering preparing for male-traditional careers. Fralick's (1983-1984) comparative study concluded that community college women enrolled in male-traditional programs and female traditional programs are characteristically similar in their relationships to their families. Although no significant age or ethnicity differences were discovered, women in male traditional programs perceive marriage to be less important than do women in female traditional programs. Women in female traditional programs enjoy higher family incomes than do women in male traditional programs. The latter finding conflicts with studies conducted with 4 year college students. The author attributed the difference in findings to the possibility that women enrolled in male traditional community college courses are more economically motivated to prepare for better paying jobs. Fralick (1983-1984) said that women enrolled in male traditional programs are more competitive than the other women study participants. Also, the author reported that the male traditional program enrollees are more aggressive and independent. Fralick

defined a male traditional job as an occupation which had less than 30% women.

Most concern about occupational equality has centered around women lately (Hayes, 1986). To achieve gender equality in the workplace, men must be encouraged to pursue occupational and educational programs previously defined as female traditional. Many men who enter female traditional educational programs or jobs are viewed with skepticism, and frequently these men feel a loss of status and prestige and become self-conscious. In addition, some are fearful that they will be perceived as homosexuals (Hayes, 1986).

Thus, as understanding of the female gender role is changing, so much understanding of the male gender role (Harren, 1979). Harren said much has been done to study the female gender role but little attention has been given to men in a scientific sense. Prior to 1973, the general rule was to view male and female traits as being at opposite ends of the continuum; male gender roles fell at one end and female gender roles at the other. For many gender role theorists, this concept changed in 1973. According to Harren, it was then that masculinity and femininity first were reported to be different dimensions. Men and women, each to some degree, have amounts of both dimensions. Harren's study also suggested that as college class level increases, students' attitudes toward behavior to gender role become more liberal. A study by Puglisi (1983) concluded that men and women do not, as many researchers have previously concluded, experience a convergence of gender roles in later life.

Anxiety and Stress

Developing closer relationships, and handling stress and anxiety were some needs expressed by undergraduate students in a study conducted by Weissberg et al. (1982). Female students expressed stronger needs to develop independence, control weight, deal with personal conflict, explore job opportunities, and become more at ease. Male students expressed stronger needs to understand more about love and intimacy and to take better notes in class.

The results of a study of college women 35 or older implied that reentry women complained of a lack of time and having to fulfill multiple roles (Kirk & Dorfman, 1983). There was a relationship between the amount of strain and the length of time that passed since these students last were in the classroom; the longer the absence, the greater the strain. In addition, helpful attitudes of instructors were strongly related to reentry women's satisfied feelings (Kirk & Dorfman, 1983).

More than 50% of the women in the United States are employed outside the home (Moulton, 1980). As gender equality increases, higher anxiety levels are affecting both genders today more than ever. For women, much of the anxiety increase is caused by sex discrimination blocking their career aspirations (Moulton). Anxiety can be detrimental to people's physical and mental well-being, but an amount of anxiety is beneficial to increased personal and professional growth (Moulton).

Persons displaying higher trait anxiety usually are more defensive when they experience failure or threats (O'Neil et al.,

1969). In a study of employees between the ages of 26-46, persons with low anxiety were compared to persons with high anxiety (Clayson & Frost, 1984). Those with low anxiety reported that their spouses were happier and more optimistic than the spouses of study participants exhibiting high anxiety.

O'Hare and Tamburri (1986) conducted a study of students with highly elevated levels of state anxiety and trait anxiety. The researchers found that these students lacked confidence in their career decision making abilities and were threatened at the prospect of having to decide upon a career.

Deffenbacher and Hazaleus (1985) determined that students who are more test anxious than other students perform at lower levels on tests than students in a less anxious comparison group. Strassberg (1973) stressed that elevated anxiety is related to lower goal expectation and that highly anxious people have less confidence.

Oppenheimer (1984) reported that adjusting to a postsecondary school environment can be quite stressful, especially to first year students. The first year is also the period during which the greatest attrition rate occurs. High stress levels can create enough anxiety in students to make them drop out of school. Findings also suggested that intervention programs designed to alleviate stressful conditions for vulnerable first year students have let to student retention and better social adjustments.

There is much disagreement regarding the definition of anxiety and its component parts (Krug et al., 1976); the construct is difficult to define (Buros, 1978; Wills & Langner, 1980). Kutash

trait anxiety experience higher state anxiety more often than persons with low trait anxiety. Those who accept the state-trait anxiety theory believe that persons exhibiting anxious symptoms in one stressful situation will generally exhibit anxious symptoms in other stressful situations (Eysenck, 1983). The state-trait theory is based on the premise that there is a difference between trait anxiety and state anxiety. Trait anxiety is more stable across time than is state anxiety; state anxiety is created by trait anxiety combined with stressful conditions in a given situation. Krug et al. (1976) maintained that anxiety levels do change over time.

Anxiety arousal is not totally physical in nature; emotions such as love, hate, and fear can create anxiety (Selye, 1983). Anxiety symptoms include headaches, persistent colds, depression, insomnia, and gastrointestinal problems (Munson, 1984). Anxiety is also marked by apprehension, low self-control, suspicion, and emotional instability (Krug et al., 1976). Calhoun and Calhoun (1983) concluded that outward emotional and behavioral signs of anxiety include restlessness, withdrawal, anger, denial, irritability, crying, complaining, nail biting, self-criticism, panic, apprehension, and moodiness. They also said that people experiencing high levels of anxiety are known to be forgetful, have short attention spans, be unable to concentrate, and be preoccupied. Krug et al. reported that anxious persons are tense, restless, jealous, insecure, easily upset, apprehensive, frustrated, drive, less satisfied with life, and lack self-confidence. Conversely, low-anxiety persons exhibit higher self-esteem.

Outward physical signs of anxiety include but are not limited to constipation, diarrhea, sweaty palms, sneezing, impaired sexual function, appetite loss, dry mouth, trembling, indigestion, insomnia, chronic fatigue, and nausea (Calhoun & Calhoun, 1983). People always are exposed to some degree of stress. That stress can affect health in significant ways by causing disease (Selye, 1980). Diseases related to anxiety adaptation are arthritis, herpes simplex, colitis, alcoholism, cardiovascular ailments, tuberculosis, ulcers, asthma, and drug addiction among others (Calhoun & Calhoun, 1983).

Lazarus (1977) said that anxiety may be related to physical illness three ways. The first is through damage to body tissue by the release of powerful hormones during stressful times. The second is via activities aimed toward coping with anxiety, such as inadequate rest, poor eating habits, smoking, and excessive alcohol ingestion. Denial or avoidance of pain or illness symptoms caused by anxiety is a third way anxiety may lead to disease. Brown (1980), Coyne and Lazarus (1980), and Zung and Cavenar (1980) also said there is a positive correlation between major anxiety and illness.

In the words of Selye (1980), complete freedom from anxiety is death. He also said there are two types of stress: eustress and distress. Eustress is a pleasant or curative stress. Distress is an unpleasant or disease producing stress. Selye stated that the key to dealing effectively with anxiety is finding a middle ground between hyperstress and hypostress. Hyperstress refers to too much

stress. Hypostress refers to a person not having enough stress, which leads to idleness and boredom. One person's reaction to stress may be entirely different than another person's reaction because their perceptions of a stressful situation are different (Henry & Ely, 1980).

Anxiety and Academic Performance

Anxiety affects learning and the retrieval of learned information (Eysenck, 1983). Moderate amounts of anxiety seem to motivate people to attain optimal levels of academic and motor performance. Miller and Harvey (1973) and Spielberger (1983) found evidence that anxiety levels have no significant effects on student's intellectual or motor performance. Nonetheless, many research studies have indicated that this is not the case.

Trait anxiety adversely affects learning in high and low anxiety students (Ward & Salter, 1974). There is no simple correlation between anxiety and learning; the effects of anxiety on learning depends on subject matter and level of difficulty (Kagan, 1987). Lately, people are becoming more aware of anxiety and its effect on students (Archer & Lamnin, 1985). Research by O'Neil et al. (1969) showed that, when compared to simple computer tasks, college students' state anxiety scores increased when they worked on difficult computer terminal tasks. Anxiety levels were measured by an anxiety inventory.

Spielberger (1962) found evidence that a school environment can create anxiety in many students, especially in those who already

are highly anxious. The results of his work suggested that anxiety can increase student dropout rates by leading to poor grades. The high anxiety students performed at lower levels than the low anxiety students even though both groups contained students of similar abilities. High anxiety levels may, however, benefit high ability students by providing motivational stimulus (Spielberger).

Students exhibiting high test anxiety performed less satisfactorily on difficult test items than students exhibiting low test anxiety (Tobias, Hedl, & Towle, 1974). Also, students with high test anxiety had higher state anxiety levels than a comparison group. Freshman college students who experienced high test anxiety had less effective study habits than students who had low test anxiety (Culler & Holahan, 1980). In addition, the students with high test anxiety received lower grade point averages than students in a comparison group.

Heinrich (1979) found that high anxiety usually improves academic performance on easy tasks but hinders academic performance on difficult tasks. She said there is a relationship among trait anxiety, state anxiety, and performance on academic tests, and that trait anxiety has a causal effect on state anxiety and performance. Directional influence was not, however, clarified in the findings. Head and Lindsey (1983) agreed with Heinrich and concluded that academic performance is significantly affected by anxiety levels; high anxiety students are hindered in academic endeavors. The authors also implied that high anxiety is precipitated by difficult tasks.

Felson (1984) indicated that student performances on standardized tests can be adversely affected by test anxiety but that grades do not appear to be affected by anxiety. Some researchers disagree with Felson's findings. For example, Williams, Decker, and Libassi (1983) reported that an anxiety management program reduces anxiety and increases grade point averages among freshman college students on academic probation. Conversely, a 1986 study by Dendato and Diener showed that relaxation therapy reduces state anxiety but fails to raise test scores; however, when combined with study skills assistance and cognitive therapy, academic performance improves.

DeMeuse (1985) conducted a study that indicated course grades and test scores can be adversely affected by stressful life events, such as personal illness or injury and bereavement. He said that instructors should realize that what happens outside the classroom can affect what happens inside the classroom. Gross and Mastenbrook's (1980) study of college students implied that persons who exhibit high state anxiety perform at lower levels when solving simple memory problems than do persons who exhibit less state anxiety.

College students inflicted with suicidal thoughts reported a significantly greater number of anxiety symptoms than did other students to whom they were compared (Carson & Johnson, 1985). The findings of Thompson's (1983) study suggested that there is a positive correlation between general anxiety, as measured by the IPAT Anxiety Scale, and writing anxiety. Lam (1978), based on a

study of adult students, found that course structure affects anxiety levels.

Jones and Page (1987) studied the prevalence of headaches among college students. They initially hypothesized that college students had headaches more frequently than other persons in general because the college experience is usually related to increased anxiety. Although no significant differences were found in headache frequency between college students and the general population, most of the queried college students who participated in the study perceived that their headaches were caused by anxiety. The headaches college women experience more frequently than college men may be related to hormonal changes during menstruation (Jones and Page).

Gender and Anxiety

Numerous research studies of anxiety and gender comparison have been conducted in recent years. Findings generally reported that females are more anxious than males. Research by Thompson (1983) indicated that older female students have higher levels of general anxiety upon school entry than older male students. In their research, Head and Lindsey (1983) found that female students in general experience more anxiety than male students.

Archer and Lamnin (1985) conducted a study on a college campus in an attempt to identify major life stressors. Significant academic stressors included tests, grades, time demands, and professors. Important personal stressors included intimate relationships, parental conflicts, economics, and conflicts with

friends. Differences between genders were discovered. Female students reported roommate conflicts and personal appearance more often as stressors than did male students. Male study participants were more concerned with peer pressure, peer acceptance, and meeting others.

A 1984 study by Martin and Light provided evidence that mean anxiety scores for women tend to decrease as the educational level increases. The study also implied that education has a great impact on how much control or mastery women have over their lives; more education results in more mastery. This realization should encourage women to obtain postsecondary education because educational anxiety can improve their self-esteem, chances for employment, and feelings of greater control over their lives. The study's findings further indicated that anxiety is more prevalent in women.

A study by Antonucci and Akiyama (1987) found that older men between 50-95 years tend to exclusively rely on their spouses for personal support. Women in the same age range have larger personal networks and receive personal support from numerous sources. The men in this age group reported greater satisfaction with marriage than the women.

Also, Antonucci and Akiyama (1987) compared young college men and women in the area of support resources. Women students were found to possess more. Women generally ask for and receive more support during times of personal stress than do men; women are more apt to have confidants than men. The study also suggested that men

can become more easily isolated when the traditional marital role is interrupted. The study's authors suggested that men may experience greater problems with anxiety because of their limited support networks.

Krug et al. (1976) stated that teenagers are more anxious than adults, and that males as a group are less anxious than females. They also said that by about 60 years of age, anxiety levels again begin to rise. Head (1984) conducted research that supported these findings in part. He reported that females experience higher levels of trait anxiety than males. Additionally, Bernstein & Carmel (1986) found in their research, that women have higher trait anxiety than men and that trait anxiety decreases with age.

When Taylor (1953) was establishing norms for the Taylor Manifest Anxiety Scale, she found that the mean anxiety score was somewhat higher for women than for men, but the difference between the two means was not statistically significant. In a study of college students aged 17-23, Edwards, Zeichner, and Greene (1984) showed that there were gender differences in anxiety levels as measured by an anxiety questionnaire, but the gender differences were not clear in the research report. No significant differences were found in anxiety levels of single, divorced, or married graduate social work students in a 1984 study by Munson. In addition, no significant differences were found on the basis of gender. The low response rate of 42% in the Munson study was a definite limitation.

In a contrast to these research results are findings from a

1980 study by Kaplan that implied women are more apt to experience major anxiety-inducing life events than men. Results of the study also showed there is a relationship between socioeconomic status and major anxiety inducing life events. Men and women react differently physiologically under stress (Frankenhaeuser, 1980). A study conducted by Frankenhaeuser, Dunne, and Lundberg (1976a) found that males showed elevated levels of adrenaline in moderately stressful situations. Other anxiety research (Frankenhaeuser and others, 1976b) provided evidence that in highly stressful situations both genders have high adrenaline levels, but the men's levels are more highly elevated than the women's levels. No performance differences were detected between genders.

A considerable amount of research has been conducted regarding anxiety and age variables. Pruchno and Smyer (1983) concluded that anxiety can be a significant mental health factor in older people. Osipow's (1985) study determined that age appears to play an integral role in anxiety creation. Levels of responsibility affect older persons more than younger persons, but younger persons are more affected by their physical environment, dependence on others for financial support, and less authority and independence. The research involved students who were 60 years or older.

A study of students between the ages of 18-19 years found that they are more concerned with stressors, such as peer pressure, peer acceptance, grades, studying and competition, than older students (Archer & Lamnin, 1985). In the same study, it was found that students 22 years or older are more concerned with financial

problems than are younger students. In a recent study of dental hygiene students, Cecchini and Friedman (1987) discovered that students at the junior year level display significantly higher levels of anxiety than students at the senior year level.

Adult students who have been away from the formal classroom for a long period may experience elevated anxiety levels when they return to the classroom (Ochoa, 1984). Thompson (1983) concluded that returning students experience less writing and general anxiety than traditional students. A study by Gerson (1985) evaluated the amount of anxiety, when compared to housewives, felt by female nontraditional students. She reported that female nontraditional students experience greater satisfaction from their multiple roles, but they also experience more anxiety because of their multiple roles than housewives experience in their single roles. Her research findings supported Sales et al. (1980).

Blanchard and Cherry (1985) found that the mere thought of returning to school created anxiety for many reentry women. Middle-aged women experience more anxiety from their role as mothers than in their roles of paid employees (Barnett & Baruch, 1985). In addition, mothers, regardless of job situations, reported more highly elevated levels of anxiety than women with no children. Employment had no significant relationship to anxiety in the study; however, the authors stated that women in higher prestige jobs were over represented in the research.

Kuh (1980) indicated that older students become more anxious than traditional students as course credit loads increase. He also

said that older students became more tense, aggressive, and socially isolated than a comparison group of traditional students. Many traditional students perceive parents as significant stressors in their lives; however, this usually is not the case with reentry students (Anderson & Yuenger, 1987). Jacobi's (1987) investigation implied that women reentry students between the ages of 26 - 66 experience less anxiety attributed to school enrollment than traditional women students who are between the ages 19 - 29. The author's reasons for the age overlap of the two populations are unknown, as are the author's definitions of reentry and traditional women.

An examination of older students suggested that they may develop anxiety as it relates to their feelings of competence (Mardoyan et al., 1983). Sands and Richardson (1984) reported that midlife women, ages 30 - 49, display anxiety symptoms at different levels. The younger midlife women and those with low incomes, compared with older midlife women, experience more depression and anxiety. Income was the best predictor of depression, a symptom of anxiety.

An investigation of students returning to college to participate in a graduate social work program implied that collegians with multiple roles experience less rather than greater anxiety (Fortune, 1987). The investigator defined these educational participants as nontraditional students. The term does not appropriately apply to the students because they previously completed a college degree. Another limitation was that the study

did not consider that the subjects had time to adjust to the school environment. Neither did the study consider that the students withdrew from college if they did not adjust effectively. One anxiety measure used by the investigator had a low internal reliability correlation coefficient of .54. The author concluded that multiple roles created by marriage, children, and employment do not create role overload and increased anxiety. Rather, these role expectations are directly responsible for producing less anxiety.

Other anxiety research has considered different variables. A study completed in 1987 by Barney, Fredericks, Fredericks, and Robinson involving freshman and sophomore college students inferred that social class and anxiety scores are significantly related; persons in lower social classes reported higher levels of anxiety as compared to a group of persons in higher social classes. Their findings supported Simpson (1980). Stout and Posner (1984) uncovered evidence to suggest that anxiety is related to job satisfaction at a level of significance. On the basis of their research, Cohen, Clark, and Sherrod (1986) concluded that persons who have high levels of social support display fewer psychological symptoms of anxiety than persons who have low levels of social support.

Anxiety Measurement

Frequently, anxiety has been measured using interview and observational techniques. There is, however, a lack of technique standardization; therefore, reliability correlation coefficients are

increased through the use of psychological tests, such as the Institute for Personality and Ability Testing (IPAT) Anxiety Scale (Krug et al., 1976). The author of the scale, which was originally published in 1957 by the aforementioned Institute for Personality and Ability Testing Incorporated, is Raymond B. Cattell. Some researchers have suggested that the IPAT is appropriate for use with persons 14 years or older (e.g., Krug et al.). Some, however, have reported that the self-report is to be used to measure anxiety levels in senior high school students and adults at most educational levels (Sweetland & Keyser, 1983). Initially, the test was designed to be administered to persons 14 or older who can read at a minimum sixth-grade level. Adult norming of the IPAT was originally done using test subjects between the ages of 18 - 50. The average age of the 530 males and 405 females was age 30. The test was designed to be verbally undemanding and as nonstressful as possible. In the case of a blind examinee, the entire test may be administered orally. The test can be given either individually or to large groups and is referred to as a "Self-Analysis Form" rather than as an anxiety scale, in order to reinforce the examinee to be as frank as possible (Krug et al., 1976).

The instrument is one of the most widely used anxiety scales (Buros, 1978). Apprehension, tension, low self-control, emotional instability, and suspicion are the anxiety components in the IPAT (Krug et al., 1976). The questionnaire is most appropriate when used as a quick screening device with large groups of people (Buros, 1978). Buros said that the IPAT has no equal when used as a quick

(Krug et al.). The IPAT correlated with the State-Trait Anxiety Inventory for college females at the .75 level and college males at the .76 level (Spielberger, 1983). The concurrent validity correlation coefficients of the IPAT with the Taylor Manifest Anxiety Scale and the trait score on the State-Trait Anxiety Inventory were reported as .70 and .76, respectively (Buros, 1978).

Although anxiety is a construct that is difficult to adequately define, the IPAT apparently provides an acceptable sampling of its components (Buros, 1978). Ample evidence has been gathered to establish the construct validity of the IPAT (Buros, 1959; 1965).

Krug et al. (1976) reported a Kuder Richardson Formula 20 reliability coefficient of .80. Overall, reliability of the IPAT is good. Test-retest correlation coefficients ranged from .82 -.93 and split-half coefficients ranged from .78 - .92 (Buros, 1978). Keyser and Sweetland (1984b) reported that the IPAT had a test-retest reliability coefficient of .86 and a Kuder Richardson coefficient of .80. The IPAT test manual reported split-half reliability coefficients ranging from .78 - .92 (Krug et al.). Anxiety levels change over time, so test-retest reliability correlation coefficients tend to decline as more time passes (Krug et al.). Keyser and Sweetland (1984b) reported a test-retest coefficient over 2 years of .60. Other studies have reported test-retest coefficients of .93 after 1 week; .87 and .86 after 2 weeks; and .83 after 4 weeks (Krug et al.).

The atisfactory level of construct validity was established, in part, by relating the test to anti-anxiety medication effects,

self-esteem, relaxation procedures, school dropout proneness, and divorce adjustment (Buros, 1978). Construct validity of the Sliding Person Test (SPERT), a nonverbal measure of self-esteem, was examined on its convergent and discriminant qualities (Karmos & Karmos, 1979). According to Karmos and Karmos, over 200 college students, graduate and undergraduate, were given the SPERT, Bell Adjustment Inventory, IPAT, Marlowe-Crowne Social Desirability Scale, and an intelligence test, among others. The low overlap of SPERT with the IPAT and other psychometric devices established evidence of appropriate discriminant validity of the SPERT. This low overlap is also an indicator of the discriminant quality of the IPAT.

The IPAT test manual has a high rating because of its depth and clarity (Buros, 1978). Separate and combined norms are provided for males and females. The standard error of measurement was reported as three raw score points which means that a person's true anxiety score is supposed to fall within three raw score points of the earned score 66% of the time (Krug et al., 1976). Normative studies have found that women, on the average, usually score approximately three raw score points higher on the IPAT than men. The significance of this information was not explained (Krug et al.). Normative data have also indicated that members of the general adult population generally register lower levels of anxiety than high school students, as measured by the IPAT (Krug et al.).

Research has shown that high anxiety levels have a negative impact on learning. Forty undergraduates were selected, on the

basis of scores received on the IPAT, to participate in an investigation of trait anxiety and learning (Ward & Salter, 1974). Findings showed that trait anxiety hindered learning in both the high and low state anxiety groups. A 1964 study by Schwab and Iverson of 80 undergraduate students was undertaken in an attempt to discover a relationship between high anxiety and figural distortion. Findings were based, in part, on IPAT scores.

Silverblank (1973) examined a group of students talented in mathematics and a group of talented English students regarding their levels of responsibility, anxiety and sociability. She stated that these personality traits have a major effect on the attainment of various skills and abilities. Silverblank administered the IPAT to ascertain the subjects' amount of anxiety; she defined anxiety as a feeling of tension. Silverblank described the IPAT as a highly reliable instrument that can be completed in 10 minutes.

In a study of 100 college students, Posey and Runyon (1974) administered the IPAT to a group of subjects and compared their scores to those received on a number recognition test and their intelligence quotients. Strassberg (1973) examined 55 men and 86 women college students. He used the IPAT as one of his measurement instruments. The primary objective of his research activity was to gain a clearer perception of the correlation among locus of control, expectation of valued-goal achievement, and anxiety. Archer (1979) studied the relationship between locus of control and three types of anxiety. He used the IPAT and State-Trait Anxiety Inventory to measure general trait anxiety.

The IPAT and a locus of control scale were employed to select 272 college students to participate in an investigation of the relationship between locus of control and anxiety (Rajmohan & Kuppan, 1980). The study found no significant correlation between anxiety and gender. But a significant relationship was reported between males and females identified as having internal locus of control. The females demonstrated higher levels of anxiety than the males.

The IPAT has been employed in numerous evaluations of anxiety management and intervention programs. One selection criteria applied to a study of the effect a specific type of biofeedback training had on anxiety level was the IPAT score (Hiebert, 1981). Following feedback training, the adult participants were assessed. The author of the study reported that persons older than 40 or younger than 25 demonstrated the greatest anxiety decline as measured by frontal EMG scores. Persons between the ages of 30 - 39 exhibited significantly less anxiety abatement than older subjects. Males were found to have gained the most from treatment and their initial frontal EMG scores were lower than those of participating females. The IPAT was used in conjunction with another anxiety inventory in the selection of college students for inclusion in an examination of the effectiveness of a relaxation program aimed toward general anxiety reduction (Spoth & Meade, 1981). Results of the study indicated that the intervention program reduced trait anxiety at a level of statistical significance.

Sherman and Plummer (1973) studied a group of 45 college

students enrolled in a psychology course. The purpose of the scientific investigation was to determine the effects of relaxation training. Research findings indicated that members of the experimental group exhibited signs of significant improvement as signified by decreased anxiety following treatment. The IPAT was administered as a pretest and posttest.

An examination of the effects of yoga on female college teachers inferred that anxiety levels were abated as measured by the IPAT (Anantharaman & Kabir, 1984). Fernandez, Brechtel, and Mercer (1986) compared college students receiving counseling on a personal basis with college students receiving computer-assisted counseling. Student anxiety was measured by the IPAT. Results showed that both counseling techniques were equally effective in reducing anxiety.

The IPAT, along with other psychological inventories, was used in a 1987 study by McCann, Woolfolk and Lehrer who examined the effects of different intervention treatments given to 28 anxious adults between the ages of 20 - 56. Borgeat (1983) conducted an investigation of two types of relaxation treatment that involved 16 college students between the ages of 24 - 46. The investigator evaluated both treatment groups with the IPAT.

The success of a program of self-instructed relaxation was compared to a program of therapist-instructed relaxation (Hiebert, Cardinal, Dumka & Mark, 1983). Sixty-three adults, aged 18 - 54 were involved in the study. Anxiety levels were measured using the IPAT. Hurley (1980) studied 60 college students' scores on the IPAT

and other psychometric inventories. Three of four treatment groups received training in self-regulation. Hurley reported that the hypnosis treatment group was the most successful in alleviating anxiety.

The IPAT has been used to assess the relationship between anxiety and self-esteem. A group of 146 college women was given the IPAT (Shand & Grau, 1977). The women were divided into high and low anxiety groups according to their inventory scores. When compared to the low-anxiety group, greater incongruence between perceived self and ideal self existed in the high-anxiety group.

A 1974 comparative study by Upmanyu of 71 students between the ages of 15 - 17 considered anxiety and socioeconomic status. From among these people, three groups were identified. One was formed of students who were viewed as popular. Another was formed of students perceived to be rejected by other students. The third was composed of students who were isolated. Ego weakness was the principal reason that students were isolated or rejected. Rejected students, more often than students in the other groups, felt unworthy, depressed, and guilty. The IPAT scores indicated that the popular students were the least anxious of the three groups.

Wheeler (1965) undertook a study to investigate the effect anxiety had on self-reported self-esteem. For a portion of his research, the author utilized the IPAT. His findings suggested that females' anxiety scores were higher than those of male study participants and, overall, high anxiety levels were inversely related to self-esteem.

The IPAT has been utilized in a variety of situations. A 1985 study by Healy and Mourton found that a group of female college students who previously were identified as being congruent in the areas of career maturity and personal identity experienced less anxiety as measured by the IPAT. The IPAT was completed by 20 employed and 20 unemployed women in a study conducted by Vohra and Sen (1986). No significant difference in anxiety was uncovered. Sixty alcoholic patients completed a personality inventory and the IPAT in a 1985 study by Calaycay and Altman. Findings implied that anxiety levels in alcoholics are significantly higher than those found in the normal population.

Bass and Levkulic (1985) studied the effect of verbal reinforcement on intelligence scores. Two groups of high and low anxiety undergraduates were selected for the investigation on the basis of IPAT scores. In addition to other psychometric inventories, the IPAT was administered to 221 college students between the ages of 17 - 42 (Trueman, 1984). The study's author concluded that college students who felt depersonalized demonstrated more anxiety symptoms than students who did not feel depersonalized.

The results of a study of the correlation between heart rate and trait anxiety among 116 undergraduates were, in part, based on IPAT scores (dePascalia, Alberti, & Pandolfo, 1984). High supporters of the feminist movement were compared to low supporters of the feminist movement in a study involving over 1,500 women (Redfering, 1979). Subjects were given the IPAT and other personality scales. Findings, in part, showed that there was no

significant difference in anxiety level between the two groups of women.

A study was completed in 1977 by Oleski who examined the relationship between indefinite jail confinement and anxiety levels of 60 inmates housed in an urban jail. The inmates were between 18 - 26 years. The IPAT was administered to the inmates after one week of confinement, and again seven weeks later. The researcher reported that the posttest showed a significant elevation of IPAT anxiety scores.

Findings from an investigation into the nature of emotional indicators evoked by a word association test was somewhat based on IPAT scores (Hundal & Upmanyu, 1981). A comparative study of women elementary, secondary, and college teachers suggested that elementary school teachers experienced significantly higher anxiety than college teachers (Singh & Kaur, 1976). The anxiety scale used in the study was the IPAT. Also, the IPAT was employed in an examination of chronic tension headache patients between the ages of 22 - 56 (Borgeat, Hade, Larouche & Gauthier, 1984). Scores received from trait anxiety scales can be employed to screen various types of people to identify anxiety problems and evaluate the effects of counseling, psychotherapy, and drug treatment programs (Spielberger, 1983).

Anxiety Intervention

Anxiety management programs often are reported to be successful in reducing anxiety among students (Anantharaman & Kabir, 1984; DeMeuse, 1985; Guidry & Randolph, 1974; Hameister & Hickey, 1977,

Johns & Johns, 1984; Kooken & Hayslip, 1984; Leach & Roberts, 1988; Simpson, 1980; Suinn & Deffenbacher, 1980). Simpson reported that the most effective way to deal with stress and anxiety is to design and implement educational intervention programs to develop coping skills because coping skills may lessen the negative effects of anxiety. Problem-solving techniques are an example of coping skills. Suinn and Deffenbacher held the view that anxiety management based on problem-solving and relaxation techniques can increase self-control Not only adults experience anxiety, children and older adolescents feel anxiety, too.

According to Johns and Johns (1984), anxiety can create a condition that can mentally disrupt people of all ages. They believed that people must be taught to respond to anxiety in meaningful ways. They said that providing positive reinforcement to students can be an effective method of lessening the damage created by anxiety. They also agreed that relaxation therapy can be a successful strategy for alleviating anxiety.

Kooken and Hayslip (1984) reported that anxiety intervention programs designed for nontraditional students sound promising, but they did not define any of the programs. Hameister and Hickey (1977) agreed with the need for anxiety management programs for nontraditional students. They said that anxiety reduction is an important aspect of any educational program addressing the needs of older students. Nigro (1981) proposed that learning how to effectively deal with anxiety is a concern faced by many postsecondary education students of all ages.

Based on their research, Leach and Roberts (1988) determined that few women choose high tech programs. The situation was attributed to three problem areas: recruitment, academic readiness, and retention. According to these research authors, many would-be students suffer from math anxiety and are passive or aggressive. Leach and Roberts were of the opinion that countless women must be taught to overcome math anxiety and to become assertive. This process would help many women build self-confidence to the extent they can begin to gain control over their lives. Christian and Wilson (1985), in their scientific work, defined counselor intervention strategies designed to assist reentry women with anxiety management, test anxiety, and relaxation training. Head and Lindsey (1983) inferred that several anxiety management intervention programs have been implemented with varying degrees of success.

Summary

Anxiety is a hypothetical psychological construct and disagreement abounds as to its component formation. The term is purported to have multidimensional qualities. Despite the disparity, anxiety vitally affects a person's ability to successfully cope with the demands and rigor of everyday living; and may render a person ineffective in the arenas of school, employment, politics, and personal relationships. Anxiety may appear throughout any phase/stage of a person's life cycle.

The level of one's anxiety can be a predictor of college success or distress. Anxiety has the capacity to negatively impact

the academic performance of traditional and nontraditional students, alike. Neither gender nor any age may be discriminated from being affected. Considerable effort should, therefore, be made to enable students to more clearly define and attain higher academic and vocational goals. Educators should become more aware of the level of anxiety their students have and be cognizant of the influence instructors and other educational personnel can have on students. Adults appear better suited to an andragogical teaching approach, which is student-centered and based on mastery learning.

Anxiety directly affects vocational decision making. For numerous late adolescents, the process of separating from their parents can create serious anxiety problems. Traditional students rely more heavily on their families and educational institutions when making career decisions; nontraditional students rely more on themselves to make career decisions.

Anxiety plays an integral part in the formation of gender roles. The multiple roles of nontraditional students, especially females, can cause guilt feelings because they often believe they are providing less care for their families as a result of being enrolled in college. As women gain self-esteem and gender equality increases, higher anxiety levels are affecting both genders more today than in the past.

High anxiety can precipitate disease, depression, frustration, and other debilitating conditions. Anxiety, as a psychological construct, frequently is used as a synonymous term for stress even though the practice is not fully approved.

Trait anxiety refers to a person's general level of anxiety and state anxiety connotes a transitory state. Trait anxiety is relatively stable over time, but levels do change. People experiencing high trait anxiety often exhibit more state anxiety than persons with low trait anxiety.

People do not always experience stress and anxiety similarly. What is a stressor to one person may not be perceived as a stressor by another. Trait anxiety seems to lessen with age and males tend to be less anxious than females. Today's students tend to exhibit more symptomatic aspects of anxiety than their predecessors 10 years earlier.

High anxiety can improve performance on easy tasks and hinder performance on difficult tasks. In general, an amount of anxiety heightens performance, but too much anxiety is debilitating. Many college campuses have designed and implemented intervention programs to minimize the destructive effects of anxiety. These programs should stress the acquisition of adequate coping skills so high anxiety individuals can focus their efforts on anxiety abatement. Several such programs have reported varying degrees of success.

In addition, high anxiety can lead to significant college student attrition rates. Abundant current literature has predicted increased competition among postsecondary education institutions in the realm of student recruitment because traditional students will be less available. If this should prove true, colleges and other postsecondary schools should recognize the strategic importance of

designing and implementing effective recruitment and retention programs geared to the needs and characteristics of nontraditional students.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to determine if a differnce in mean anxiety existed between traditional and nontraditional postsecondary, academic students. The population for this study involved students within the nineteen states of the North Central Region of academic institutions in Junior Community Colleges of the United States. The study was of importance to provide possible solutions for improvement of student retention. Responses to a forty item IPAT questionnaire were measured for anxiety level. Descriptive research techniques were utilized. Descriptive research is used to obtain information concerning the current status of the phenomena; and its methods are to describe "what exists" with respect to variables or conditions in a situation (Key, 1992).

Gathering of Baseline Data

An intense review of literature was researched in order to determine the capacity of anxiety that negatively impact one's academic performance, and renders one ineffective or unwilling to continue their education. Results concluded that neither gender nor age may be discriminated from being affected. In addition, abundant

research has stated that high anxiety can lead to significant college student attrition rates.

Once determined that anxiety may be a critical factor in student attrition rates, it was of interest to determine whether the age of the student was a determining factor. In the process of obtaining information relevant to this study, it also became evident that gender contributed significantly to an anxiety characteristic. This information was found to be of the utmost importance for implementing retention programs geared to meet the needs of an anxiety-ridden student.

Selection of Study Group

Due to the fact that two year junior colleges are prevalent in student attrition rates, over four year university institutions, the two year college was determined to be the targeted population sample for this study. According to the Council of North Central Community and Junior Colleges, there are 357 two year colleges with established membership. The North Central Accreditation Association was selected as the most appropriate region to be measured, because it is the largest among the six accreditation regions, and identified a wide range of services to the targeted traditional and nontraditional student population.

Nontraditional students (over 25 years of age), and traditional students (age 18-25), who are enrolled in one of the 357 postsecondary, academic, accredited junior community colleges within the nineteen states uniting the North Central Accreditation

Association of the United States comprised the two groups requested to participate in the survey's study. Written permission was received from the Director of the educational facility to conduct the research.

Conduct of the Study

An attempt was made to have participation among each of the nineteen states within the North Central Accreditation Association, regardless of variance in population or school size. Initially 150 schools were randomly selected in all of the nineteen states that form the above indicated region. A cover letter was sent to these schools, explaining the research, as reflected in Appendix A. Within that cover letter was a self-addressed, stamped postcard, to be returned with an indicated Yes/No response for participation. There was also a request for the name of a required contact person in the school, and their respective telephone number/extension.

Fifty-two schools representing fifteen of the targeted nineteen states either telephoned their response or returned the postcard expressing their decision to participate or to reject inclusion in this study. Thirty of the fifty-two responding schools agreed to participate; and twenty-two respondents rejected involvement. Follow-up letters were consistently addressed to additional randomly-selected schools in order to obtain participation from all nineteen states in this study.

To each of the thirty receptive schools, twenty IPAT Test Booklets were mailed, with a subsequent cover letter (see Appendix

A), and an enclosed self-addressed stamped envelope for their convenience in responding. This totaled 600 tests intended for administration to accepting participant schools. Follow-up telephone calls were made to the participating schools to encourage return of the tests, when responses appeared unusually late, slow or forgotten. Several of the responding schools neglected to return all of the tests they had agreed to submit. Reasons are unknown and unclear for the lowered response rate, following the school's written commitment.

Traditional and nontraditional students were compared using trait anxiety level as the dependent variable. Age and gender were considered independent and moderator variables, respectively. The results were analyzed on the basis of the indicated research questions.

Each participating school had an agreed-upon contact person who directed the submitted tests. There were no subject classes deprived of or limited to being a part of the study. In fact, all ages and departments were encouraged to be a respondent for diverse representation.

Instrument Data

The standardized psychological inventory used to collect trait anxiety, age and gender data was: The Institute for Personality and Ability Testing (IPAT) Anxiety Scale, titled "Self-Analysis Form" (Krug et al., 1976).

The IPAT measurement is a copyrighted instrument and cannot be included for viewing in the analysis of this research. However,

approval was obtained by the Institutional Review Board for Human Subjects Research in September, 1993 to administer the test, and a copy of the approval is attached as Appendix B. The IPAT has sufficient reliability and validity correlation coefficients. This psychometric instrument is well known and has been widely used.

The physical format of the IPAT scale is a four-page booklet measuring 8 1/2" x 11". The test contained 40 questions and each item had three possible responses. Instructions for taking the test were printed on the front of the test booklet, along with two example items. All answers were marked directly on the two inside pages of the four-page test booklet. The front cover was used for examinee identification and for the instructions. However, the participants were requested to avoid putting their name on the test. Instead, they were requested to be identified by acknowledging their age, gender and state, only. The back cover of the test booklet was used for recording scores and clinical observations.

The scale can be administered to groups or individuals. Directions were simple, and "almost anyone can administer the questionnaire" (Keyser & Sweetland, 1984a). Ten minutes was reported as the usual time to answer the self-report. The title on the question and answer booklet is "Self-Analysis Form," to alleviate anxiety in responding participants. When the tests were returned, they were scored with a key template and calculated for results that indicated a high, moderate or low level of anxiety.

Analysis of the Data

Twenty-five of the thirty intended schools actually took part in this research study. The twenty-five schools were in thirteen various states of the North Central Accreditation Association. Of the 600 tests targeted for the study, 491 were actually administered and returned, compiling an 82% response rate from that which was intended to be studied.

Respondents noted their answers on the test booklets; thus, they were not reusable. The scoring task was accomplished using a scoring template placed over the circles in which respondents indicated their item selection. The scale usually was scored in less than five minutes. (The test manual suggests the scoring time per test is one minute.)

Raw scores were quickly converted to standard scores, using the appropriate norm table (Keyser & Sweetland, 1984a). The higher the score, the more anxiety there was found within the respondent. Although three scores are provided, the single anxiety score for the 40 items is all that was recommended or needed in most cases (Krug et al., 1976).

Research Questions Measured

The following six research questions were measured in this study.

1. Is there a difference in mean anxiety between traditional students and nontraditional students?

2. Is there a difference in mean anxiety between male students and female students?

3. Is there a difference in mean anxiety between male nontraditional students and female nontraditional students?

4. Is there a difference in mean anxiety between male traditional students and female traditional students?

5. Is there a difference in mean anxiety between female traditional students and female nontraditional students?

6. Is there a difference in mean anxiety between male traditional students and male nontraditional students?

Research questions one and two were analyzed using a two -tailed (non-directional) t-test procedure; and research questions three, four, five and six were analyzed by conducting a single two-way Analysis of Variance. To be of statistical significance, it was necessary for the variable mean differences to reach the .05 level.

Summary

Nontraditional and traditional students representing the nineteen states of the North Central Region of academic institutions in Junior Community Colleges of the United States were administered the Institute for Personality and Ability Testing Anxiety Scale (IPAT). Age and gender comparisons were made to determine between-group and within-group variance.

The IPAT has been found to have sufficient reliability and validity correlation coefficients. This psychometric instrument is well known and has been widely used. Also, this scale has been

utilized to investigate anxiety constructs in a wide variety of research studies involving males and females of different ages. Some of the research examined the effects of anxiety on parental separation, academic performance, incarceration, chemical dependency, intervention strategy, vocational aspiration, guilt, gender role, and locus of control.

CHAPTER IV

RESULTS OF THE STUDY

The purpose of this study was to determine if a difference in Mean Anxiety existed between traditional and nontraditional postsecondary academic students.

The population as defined in this study consisted of two year institutions within the North Central Accreditation Association. Nineteen states are included in the membership of this region, and representation was sought from all of the respective states.

Initially a cover letter was sent to 150 randomly selected schools in all of the nineteen states that form the above indicated region. Within that cover letter explaining the research was a self-addressed stamped postcard indicating a Yes/No response for participation with a request for a required contact person and their respective telephone number. Fifty-two schools representing fifteen of the nineteen states returned the postcard expressing their interest or lack of same for inclusion in the study. Thirty of the schools agreed to participate and twenty-two of the responding schools rejected involvement. Each of the receptive thirty schools was sent twenty IPAT Test Booklets, with a self-addressed, stamped envelope for their convenience in response. (The Test Booklets were sent to willing participants, only, due to the cost factor in purchasing the test itself.) The thirty participating schools

represented fifteen of the targeted nineteen states. Twenty-five colleges entailing 491 students composed the actual respondents of the study. This represents an 82% response rate from the 600 tests intended for administration.

Statewide, these results include 68% of the targeted North Central region. Of the six states not included in this study, three offered no response to the initial request for participation; one rejected participation; and two states that originally agreed to the research never returned the results of the tests they were sent to be administered.

Of the 491 students representing 82% of the total desired population sample evaluated, 163 (33%) were males and 328 (67%) were females. Traditional students (age 18-25) accounted for 50% ($\underline{n}$ = 247) and Nontraditional students (over the age of 25) accounted for 50% ($\underline{n}$ = 244) of the total population sample ($\underline{N}$ = 491) evaluated.

Table I defines the institutions that participated in the North Central Accreditation Association study. Tests were received from thirteen states within the region with a response rate ranging from 50% to 100% of the tests mailed. Seven states participating in the study had a 100% response rate. Six hundred tests were mailed and 491 were returned for an accumulative 82% return rate.

Answers to Anxiety Research Questions

Table II shows the results of the study for the first research question to determine if there is a difference in Mean Anxiety between Traditional Students and Nontraditional Students. Each of the 40 IPAT items were individually evaluated.

TABLE I

PARTICIPATION OF COLLEGES BY STATE AND RESPONSE RATE

State	Tests Mailed	Tests Returned (Frequency)	Response (%)
Arizona	40	39	97
Arkansas	40	39	97
Illinois	60	60	100
Iowa	20	20	100
Kansas	20	13	65
Michigan	20	0	0
Minnesota	80	60	75
Missouri	40	40	100
Nebraska	20	0	0
North Dakota	20	20	100
Ohio	60	60	100
Oklahoma	40	40	100
South Dakota	60	60	100
West Virginia	40	20	50
Wyoming	40	20	50
TOTALS	600	491	82

TABLE II

T-TEST RESULTS FOR TRADITIONAL VERSUS NONTRADITIONAL STUDENTS ON THE IPAT ANXIETY SCALE

Item No.	Traditional X's	Non-Traditional X's		t Value
1	2.3	2.5	*	-2.12
2	1.8	1.7		.91
3	1.4	1.4		-1.02
4	1.8	2.0	*	-2.57
5	1.9	1.7	*	2.38
6	1.5	1.6		-1.73
7	2.2	2.4	*	-2.46
8	1.6	1.9	***	-3.95
9	1.5	1.7	**	-2.90
10	1.7	1.6		1.93
11	1.2	1.1		.79
12	2.0	2.0		-.80
13	1.8	1.7		1.16
14	1.8	1.6	**	2.92
15	1.9	2.0	*	-2.24
16	2.0	2.2	***	-3.64
17	2,0	1.8	***	3.94
18	1.0	2.0		-1.30
19	2.1	2.0	*	2.49
20	1.8	2.0	*	-1.99
21	2.1	2.3	*	-2.29
22	1.6	1.7		-.97
23	1.8	1.9	*	-2.26
24	1.9	2.2	***	-4.07
25	1.7	1.9	*	-2.52
26	1.6	1.6		.30
27	2.2	2.4	**	-2.68
28	1.8	2.0		-1.96
29	1.9	1.8		1.51
30	1.7	1.6		1.67
31	2.3	2.3		.70
32	2.1	2.4	**	-3.46
33	2.1	2.3	*	-2.32
34	1.9	1.8		1.16
35	1.9	2.0		-1.96
36	2.3	2.4		-1.84
37	1.9	1.7	*	2.04
38	2.2	2.4	*	-2.27
39	2.0	1.8	**	2.81
40	1.6	2.0	***	-4.42
Raw Score	36	31	***	4.17
Sten Score	7.2	6.2	*	2.25
Percentile	68	55	***	4.77

(*p<.05; **p<.01; ***p<.001) N = 491

Nontraditional students had significantly lower mean anxiety levels than traditional students in this study. Krug et al. (1976) stated that teenagers are more anxious than adults. This finding corroborates a study by Bernstein and Carmel (1986) who found that trait anxiety decreases with age. Thompson (1983) concluded that returning students experience less writing and general anxiety than do traditional students.

Male Versus Female Students

Table III describes the findings for the second research question to determine if there is a difference in Mean Anxiety between male students and female students. Again, each of the forty IPAT items were individually evaluated.

Male students exhibited a significantly lower mean anxiety level than female students. This finding contradicts Roehl (1980) who indicated that males exhibited higher anxiety levels than did a comparison group of females. However, Krug et al. (1976) stated that males, as a group, are less anxious than females. Their finding was supported by Head (1984) and Bernstein and Carmel (1986). These researchers reported that females have higher levels of trait anxiety than do males. Head and Lindsey (1983) implied that, in general, female students experience more anxiety than do male students.

Table IV describes the breakdown between Raw Score, Sten Score and Percentile Numbers. In this particular study between Traditional Students (Age 18-25) and Nontraditional Students (over the Age of 25), the Mean age of participants was Age 27, and the Maximum age of

TABLE III

T-TEST RESULTS OF MALES VERSUS FEMALES
ON THE IPAT ANXIETY SCALE

Item No.	Males X's	Females X's		t Value
1	2.4	2.5		- .75
2	1,6	1,8	**	-1.75
3	1.3	1.4		-1.29
4.	1.9	1.9		- .30
5	2.0	1.7	**	3.35
6	1.6	1.5		.80
7	2.2	2.3	*	-2.06
8	1.7	1.8		-1.63
9	1.5	1.6		- .83
10	1.7	1.6		.84
11	1.1	1.2	*	-2.16
12	2.1	2.0		.86
13	1.9	1.6	**	3.31
14	1.8	1.7		1.34
15	2.0	1.9		.75
16	2.0	2.1		-1.47
17	1.9	1.9		- .16
18	1.9	1.9		.18
19	1.9	2.1	*	-2.51
20	2.0	1.9		1.57
21	2.4	2.1	***	3.93
22	1.6	1.7		-1.07
23	1.7	1.9		-1.71
24	2.3	2.0	**	3.42
25	1.9	1.8		1.77
26	1.5	1.7		-1.83
27	2.2	2.3		-1.10
28	1.8	1.9		-1.78
29	1.8	1.9		-1.24
30	1.7	1.6		.47
31	1.8	2.6	***	-10.97
32	2.3	2.2		.54
33	2.3	2.1	*	2.32
34	1.8	1.8		.42
35	2.0	2.0		.37
36	2.4	2.3		1.87
37	1.7	1.8	*	-2.17
38	2.3	2.3		.36

TABLE III (Continued)

Item No.	Males X's	Females X's		t Value
39	2.0	1.9		1.68
40	2.0	1.7	***	4.06
Raw	31	35		-3.12
Sten	7	7		- .16
Percntl.	55	64		-3.22

(*p<.05; **p<.01; ***p<.001) N = 491

TABLE IV

CONVERSION OF TOTAL ANXIETY RAW SCORES TO STENS AND PERCENTILES (COLLEGE STUDENT POPULATION OF MALES AND FEMALES TOGETHER)

Raw Score	Sten		Percentile
Anxiety			
0-7	1	Low	1
8-13	2	Low	4
14-18	3	Low	11
19-23	4	Moderate	23
24-28	5	Moderate	40
29-33	6	Moderate	60
34-39	7	Moderate	77
40-44	8	High	89
45-49	9	High	96
50-80	10	High	99

Raw Score Mean = 28.7
Standard Deviation = 10.4

a participant was 58. Raw Scores ranged from 3 to 69, with the Mean Raw Score being 34; Sten Scores ranged from 1 to 10 with the Mean being 7; and Percentiles ranged from 1 to 99, with the Mean being 61.

Generally, a Sten Score of 4, 5, 6, or 7 indicates an average level of anxiety. Scores of 1, 2, or 3 are typically found in unusually relaxed individuals, and a score of 8 indicates a person whose anxiety level would be getting serious. Stens of 9 or 10 are found in only about 1 of 20 cases.

Mean Anxiety data based on Gender and Group Status are presented in Table V for each of the 40 items in the IPAT scale studied. Significant Main Effects and Interaction Effects of the Independent Variables, age (traditional vs. nontraditional) and gender (male vs. female), are noted. Specific cell means for significant differences in the cumulative raw score and percentile, for all survey participants, are presented in two-way tables identified as Table VI and Table VII.

In Table VIII, the T-Test results are displayed for Research Questions one and two. The Main Effects produced statistically significant differences for group and gender. Table IX describes the Two-Way Analysis of Variance results by group and gender for Research Questions three thru six. As indicated in this table, the Main Effects are significant, while the Interaction Effects are not significant.

Practical Significance

In determining practical signifance, if any, researchers appear varied on precise and proven scientific methods. Cohen (1988) states

TABLE V

RESULTS OF TWO-WAY ANOVA FOR GROUP BY GENDER ON THE IPAT

Item #	F Main Effects	F Interaction Effects
1	2.68	.009
2	1.78	.309
3	1.38	2.30
4	* 3.69	.041
5	*** 9.02	.106
6	1.59	.011
7	** 5.4	.148
8	2.29	.053
9	* 4.66	2.21
10	*** 9.11	.295
11	2.21	.083
12	.61	.007
13	** 6.54	.327
14	** 5.44	2.49
15	2.61	2.011
16	** 7.59	* 4.34
17	** 7.37	1.56
18	.871	* 4.05
19	** 6.08	.103
20	* 3.16	.57
21	*** 9.77	3.55
22	.997	.001
23	* 4.49	2.28
24	*** 13.96	.005
25	* 4.44	.128
26	1.71	.574
27	* 4.58	.007
28	* 3.57	.720
29	2.03	.006
30	1.78	2.64
31	*** 71.55	* 4.78
32	** 6.08	1.07
33	** 5.27	.078
34	.753	3.46
35	2.20	.20
36	* 3.34	.483
37	* 4.41	* 5.703
38	2.64	.131
39	** 5.19	.004
40	*** 18.51	.086
Raw	*** 13.90	2.43
Sten	2.65	1.21
Percentile	*** 17.01	1.55

(*p<.05; **p<.01; ***p<.001) N = 491

TABLE VI

RAW SCORE CELL MEANS BY GROUP AND GENDER

Group	Male	Female
Traditional	32.44 (n=80)	37.83 (n=167)
Nontraditional	30.17 (n=84)	31.88 (n=160)

N=491

TABLE VII

PERCENTILE SCORE CELL MEANS BY GROUP AND GENDER

Group	Male	Female
Traditional	59.42 (n=80)	72.03 (n=167)
Nontraditional	51.04 (n=84)	56.48 (n=160)

N=491

TABLE VIII

T-TEST RESULTS FOR GROUP AND GENDER

Value Label	n	Mean	Value Label	n	Mean	N	t Value
Male	164	31.28	Female	327	34.92	491	** -3.12
Traditional	247	36.04	Nontraditional	244	31.38	491	*** 4.17

(*p<.05; **p<.01; ***p<.001)

TABLE IX

TWO-WAY ANALYSIS OF VARIANCE RESULTS BY GROUP AND BY GENDER

Group	Male	Female	Source	Sig. of F
Traditional	32.44 (n=80)	37.83 (n=167)	Main Effects	*** 13.9
			Interaction Effect	NS 2.43
			Explained	*** 10.08
Non-Traditional	30.17 (n=84)	31.88 (n=160)		

N=491

(*p<.05; **p<.01; ***p<.001)

that by using the Omega Squared formula, we can determine the strength of any study. Table X demonstrates that .70 (or 70%) of the variance in the Dependent Variable (Test Score of Anxiety) was accounted for by differences in the Independent Variables (Age and Gender). According to Cohen (1988), this is noteworthy, as a "large" effect is an experiment that produces an omega squared of .15 or greater. These results were calculated from the total raw score (Main Effects and Interaction Effects).

TABLE X

OMEGA SQUARED OF TOTAL RAW SCORE MEANS FOR ANXIETY DATA

Source	SS	df	MS	F
Main Effects	4167.786	2	2083.893	13.900
2-Way Int.	364.718	1	364.718	2.433
	4532.504	3		

$$\frac{4167.786 - (2)(364.718)}{4532.504 + 364.718} = \frac{4167.786 - 729.436}{4897.222} = \frac{3438.35}{4897.222} = .70^{*}$$

*Strength of the Study for Practical Significance.

Summary of Findings

The minimum level of statistical difference was set at .05. Answers to the research questions posed in this study are as follows:

1. There was a significant difference in mean anxiety between traditional students and nontraditional students. Traditional students were more anxious.

2. There was a significant difference in mean anxiety between male students and female students. Female students were more anxious.

3. There was a significant difference in mean anxiety between male nontraditional students and female nontraditional students. Female nontraditional students were more anxious.

4. There was a significant difference in mean anxiety between male traditional students and female traditional students. Female traditional students were more anxious.

5. There was a significant difference in mean anxiety between female traditional students and female nontraditional students. Female traditional students were more anxious.

6. There was a significant difference in mean anxiety between male traditional students and male nontraditional students. Male traditional students were more anxious.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to determine if a difference in Mean Anxiety existed between Traditional and Nontraditional postsecondary academic students.

Information was sought by requesting students who were currently enrolled in one of the postsecondary academic accredited junior community colleges within the nineteen states uniting the North Central Accreditation Association region to participate in the survey's study. Traditional students were identified as being age 18-25; and Nontraditional students were identified as being over 25 years of age. Written permission was received from the director of the educational facility to conduct the research.

The standardized psychological inventory used to collect trait anxiety, age and gender data was: the IPAT (Institute for Personality and Ability Testing) Anxiety Scale, titled "Self-Analysis Form." Traditional and nontraditional students who responded to the forty questions were compared using trait anxiety level as the dependent variable, with their age and gender considered independent and moderator variables, respectively.

Research Questions

Specifically for this study, the six research questions under

investigation were:

1. Research Question I - Is there a difference in Mean Anxiety between traditional students and nontraditional students?

2. Research Question II - Is there a difference in Mean Anxiety between male students and female students?

3. Research Question III - Is there a difference in Mean Anxiety between male nontraditional students and female nontraditional students?

4. Research Question IV - Is there a difference in Mean Anxiety between male traditional students and female traditional students?

5. Research Question V - Is there a difference in Mean Anxiety between female traditional students and female nontraditional students?

6. Research Question VI - Is there a difference in Mean Anxiety between male traditional students and male nontraditional students?

The method utilized to assess this criteria within the North Central Accreditation Association was by choosing one of three possible responses on the 40 item IPAT questionnaire. Although three kinds of scores may be obtained from this test, a single total anxiety score based on all 40 items was all that the author of the test recommended as being necessary for effective results (Krug et al., 1976). The unused remaining two scores study: a breakdown into (a) an unrealized, covert anxiety, (b) an overt, symptomatic, conscious anxiety; and a breakdown of five personality components in anxiety. Since the single total anxiety score was the only score

for which norm tables were provided, and for which reliability and validity estimates were principally supplied, it was the only score evaluated.

Research Findings

Answers to the research questions posed in this study are as follows:

1. There was a significant difference in mean anxiety between traditional students and nontraditional students. Traditional students were more anxious.

2. There was a significant difference in mean anxiety between male students and female students. Female students were more anxious.

3. There was a significant difference in mean anxiety between male nontraditional students and female nontraditional students. Female nontraditional students were more anxious.

4. There was a significant difference in mean anxiety between male traditional students and female traditional students. Female traditional students were more anxious.

5. There was a significant difference in mean anxiety between female traditional students and female nontraditional students. Female traditional students were more anxious.

6. There was a significant difference in mean anxiety between male traditional students and male nontraditional students. Male traditional students were more anxious.

Discussion

Our era has been called the "age of anxiety," (Krug et al., 1976) and anxiety manifestations are certainly widespread. Frequently, how students initially adjust to a postsecondary education environment depends, in large part, on their own perceived importance of the self, their capability and the anticipated but unknown expectations of others. Anxiety is a psychological construct that can significantly affect students' success or failure rates (Hetherington & Hudson, 1981).

There are many situations in educational and social psychology where accurate assessment of an anxiety level is of prime importance. Although research has demonstrated the existence of at least 16 primary source traits which need to be considered in understanding the total personality, psychological testing almost always calls for a compromise between the theoretical and the practical. None of the 16 personality traits by itself could clearly be interpreted as anxiety. Anxiety can be measured by observation, interview or by questionnaire; however, trait ratings of one person by another lead to a question of subjectivity as a check on the perspective of the rater. That is, does the individual evaluate his own behavior along the same dimensions used by an outside observer? Are their conceptual frameworks identical? Thus, any type of psychological testing almost always calls for a compromise between the theoretical and the practical.

Further research might attempt to answer whether therapeutic intervention programs specifically constructed to lower anxiety-

ridden levels of postsecondary students actually work. If they are found to be successful, do they decrease students' attrition rates to the extent that they are fiscally sound?

Importance of Anxiety Intervention

Anxiety can be detrimental to one's physical and mental well-being (Moulton, 1980). Stress can affect health in significant ways by causing disease (Lazarus, 1977; Selye, 1980). According to Johns and Johns (1984), anxiety can mentally burn out people of all ages. Eysenck (1983) reported that anxiety affects learning and the retrieval of learned information. Moderate amounts of anxiety tend to motivate people to elevate their academic and motor performance levels; however, high anxiety seems to depress academic and motor performance.

Not all researchers agree that anxiety affects performance. Miller and Harvey (1973) and Spielberger (1983) found evidence that anxiety levels have no significant effects on students' intellectual or motor performance. Nonetheless, the preponderance of scientific data seem to suggest that this is not the case. Head and Lindsey (1983) concluded that academic performance is significantly affected by anxiety levels; high anxiety students are adversely affected in the realm of academic performance. Heinrich (1979) found evidence that supported their conclusion.

Felson (1984) suggested that student performance on standardized tests can be negatively affected by test anxiety but that grades do not appear to be affected by anxiety. Some

researchers disagreed with Felson's findings. For example, Williams et al. (1983) reported that an anxiety management program reduced anxiety and increased grade-point averages among college students on academic probation.

Spielberger (1962) published evidence that suggested a school environment can create anxiety in many students, especially in those who already are highly anxious. The results of his work implied that anxiety can lead to poor grades and increase student dropout rates. If anxiety truly causes burnout, disease, poor mental health and school attrition, then certainly it is a psychological construct that must effectively be addressed with efforts to abate its destructive tendencies.

This research study found statistically significant mean anxiety differences among postsecondary student populations. Traditional and gender role students were discovered to play a major role in the final results.

Given these findings, and taking into consideration the levels of their practical significance, the design and implementation of anxiety management programs for students enrolled at postsecondary colleges are recommended. Anxiety management programs have frequently been reported to be effective in alleviating anxiety among students (Anantharaman & Kabu, 1984; DeMeuse, 1985; Guidry & Randolph, 1974; Hameister & Hickey, 1977; Johns & Johns, 1984; Kooken & Hayslip, 1984; Leach & Roberts, 1988; Simpson, 1980; Suinn & Deffenbacher, 1980).

Simpson (1980) stated that the most effective way to combat

stress and anxiety is to design and implement educational intervention programs, thereby enabling program participants to develop coping skills. Such coping behavior might lessen adverse effects of anxiety. Problem-solving techniques are examples of coping skills. According to Suinn and Deffenbacher (1980), anxiety management based on problem-solving and relaxation techniques can increase self-control.

Johns and Johns (1984) believed that students can be instructed to react to anxiety in meaningful ways. They said that providing positive reinforcement to students can be an effective method of lessening damage created by anxiety. They also concurred that relaxation therapy can be a successful strategy for alleviating anxiety.

Conclusions

The evidence indicates that postsecondary institutions have a lot of work to do in terms of creating environments and strategies that encourage students to persist until they earn a degree or certificate. If community colleges are interested in reducing the dropout rate, they need to do something to reduce anxiety levels of traditional students.

Conclusions of this study strongly indicated that a postsecondary female student lacks appropriate coping skills to abate anxiety. Although the study is inconclusive of the origin of this psychological construct found primarily in females who are in a college environment, it is possible that the roots are synonymous

with the fear of academic and social failure, discovered in others who are comprehensively studied for personal and individualized problems. Strength in this study indicates an intense need to seriously address problems in academia that may be derived from anxiety-ridden participants.

The conclusions of this research contradicted previous findings compiled from the University of Montana (Couture, 1989). His results indicated only four of the six areas assessed, to be significantly different. He found no difference in mean anxiety between male students and female students; and he found no difference in mean anxiety between male traditional students and female traditional students. However, due to the fact that Couture's study was limited to the University of Montana environment and population, the research lacked normal distribution and therefore could not be inferred as a valid study for generalizability.

In retrospect, adequate evidence has surfaced in this recent data that provides recognition of the impact that age and gender do contribute to the success or lack of success found in the university census.

Stress management programs specific to the needs of several types of postsecondary student populations could be designed, implemented and evaluated for effectiveness. One important measure of effectiveness might be increased school retention. Another measure of effectiveness might consider effects on academic and motor performance. Intervention programs targeting anxiety

abatement should be designed to address gender differences among nontraditional students and age differences among traditional and nontraditional students. A study of 18 and 19 year old students indicated that they are more concerned with stressors such as peer pressure, peer acceptance, grades, studying and competition than are older students (Archer & Lamnon, 1985).

Another important consideration for possible future study is whether course structure affects students' anxiety levels. Lam (1978) said that it does. At the very least, instructors should be convinced that what happens outside the classroom can affect what happens inside the classroom. In addition, instructors should be informed that their actions, expectations, and teaching styles and methodologies can affect students' anxiety levels. Intervention programs could incorporate strategies for anxiety reduction for possible resolution to this ongoing problem.

Further study of the effects of anxiety on postsecondary student population is desirable. Some of the confounding variables that this research did not address included a student's part-time or full-time status, whether they were employed, had families, were struggling financially to pay their tuition, how far they traveled to and from classes, whether they were self-supporting, the size of the school(s) studied, and an individual's reason for school selection.

Summary of Recommendations

Because research in this study has discovered that high levels

of anxiety can adversely affect a student's success or failure rate; thus, the following recommendations are offered for consideration.

1. The importance of decreasing student anxiety should be recognized at all postsecondary colleges and universities.

2. Therapeutic intervention programs designed to abate anxiety should be implemented at postsecondary colleges, as part of mandatory credit that is obtained no later than the second semester of one's enrollment.

3. The initiation of separate unique therapeutic programs conforming to the specific needs of traditional and nontraditional students is suggested.

4. Evaluations of the effectiveness of therapeutic programs should be conducted regularly, focusing in part, on increased school retention and improved academic and motor performance.

5. Instructors should be made aware that what happens to students inside and outside the classrooms can affect students' performances in both areas; and that instructor's styles and methodologies may affect the anxiety levels of the students.

6. Gender differences should be considered when formulating anxiety reduction programs.

7. Age differences should be considered when designing programs to alleviate anxiety among students.

8. Additional research might focus on how late adolescents and young adults perceive parental separation, and how this impacts on their level of anxiety.

9. Further research might be conducted to determine optimal levels of anxiety among postsecondary students.

10. Course structure should be studied as to whether it affects student's anxiety levels.

11. Additional research might compare anxiety levels of postsecondary dropouts to their graduate counterparts.

12. Further assessment of anxiety with a training program as an independent variable might be considered.

Finally, research findings are less than valuable if they are shelved with no further consideration for the implementation of strategies based on statistically and practically significant results. While efforts to reduce college attrition must begin at the precollegiate level, there is much colleges and universities can do on their campuses to reduce student attrition. A college's commitment to keeping students in schools should be reflected, in part, by diversity on the board and by hiring and promoting faculty in agreement with prioritizing retention. Primary responsibility for action rests with the educational institution's officials. Without appropriate priority, the findings will fail to materialize into effective programs.

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APPENDIXES

APPENDIX A

COVER LETTERS

Sherry D. Bray, M.S., LPC, LMFT
2056 South 71st East Avenue
Tulsa, Oklahoma 74112
(918) 836-2250

October 09, 1993

Dear Colleague:

As part of an ongoing effort to decrease student attrition, I am exploring levels of anxiety among traditional (age 18-25) and non-traditional (over age 25) students in the population of the North Central Region of the United States.

Your school has been selected to be a part of this study. The IPAT Anxiety Scale titled "Self-Analysis Form" is the instrument being used. The test was designed to be verbally undemanding and nonstressful while responding to "check-off" answers of the 40 presented questions. There is no timing necessary, nor will it be identified by an individual's name. The instrument will be examined and scored by school and state, only.

This IPAT Anxiety Scale has proven reliability and validity since the original 1957 publication. Please respond by returning the enclosed self-addressed, stamped postcard indicating your voluntary participation and a contact person that the tests may be mailed to.

Thank you for your time and attention in this matter.

Sincerely,

Sherry D. Bray

Sherry D. Bray

SDB:sdb
Enclosure: (1)

Sherry D. Bray
2056 So. 71st East Ave
Tulsa, OK74112

Director of Academic Services
University of

_____

_____

I will participate in this study ____ Y ____ N
Contact Person: _____
Telephone Number: _____

Sherry D. Bray, M.S., LPC, LMFT, NCACII
2056 South 71 East Avenue
Tulsa, OK. 74112-7637
Hm. 918-836-2250
Wk. 918-481-8484

Dear:

Thank you for agreeing to participate in this study. Enclosed are 20 IPAT Anxiety Scale Test Booklets with a self-addressed, stamped envelope for your convenience in returning the tests. The test is referred to as a "Self-Analysis Form" rather than an anxiety scale in order to reinforce the examinee to be as frank as possible.

The test can be administered either individually or to large groups. It samples trait anxiety, a person's general level of anxiety (Buros, 1978). The examinee is not to be identified by name on the test; however, the state the examinee is attending school in, together with their gender and age will be primary factors in calculating the results.

The test contains 40 questions and each item has three possible responses. Directions and samples are illustrated. Ten minutes is the usual time required to answer the self-report. Respondents are to note their answers on the test booklets.

For purposes of equal representation it would be helpful if the test could be administered to a combination of Traditional (Age 18-25) and Non-Traditional (over Age 25) students.

Please know that I am appreciative and grateful for your time and attention —— and look forward to the responses, at your earliest convenience.

Sincerely,

Sherry D. Bray

SDB:sdb
Enclosures

APPENDIX B

INSTITUTIONAL REVIEW BOARD APPLICATION

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS RESEARCH

Date: 09-22-93 **IRB#:** ED-94-018

Proposal Title: ANXIETY AMONG TRADITIONAL AND NON-TRADITIONAL POSTSECONDARY ACADEMIC STUDENTS

Principal Investigator(s): Dr. Ray Sanders, Sherry Bray

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL. ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

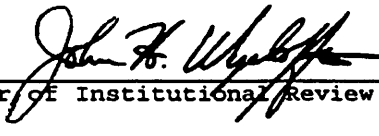
Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Comments:

A copy of the questionnaire must be included with the application

Information on the method of distribution and collection of the questionnaires is needed. An information sheet should be prepared which addresses the purpose of the questionnaire, the time involved, confidentiality procedures, and a statement that participation is voluntary. This should be attached to the front of the questionnaire.

PLEASE SUBMIT REVISIONS TO BETH MCTERNAN, 005 LSE, X45700.
DO NOT PROCEED WITH THIS STUDY PRIOR TO RECEIVING FINAL APPROVAL.

Signature:  Date: September 24, 1993

Chair of Institutional Review Board

VITA

Nelda Ann Bray

Candidate for the Degree of

Doctor of Education

Thesis: ANXIETY AMONG TRADITIONAL AND NONTRADITIONAL POSTSECONDARY ACADEMIC STUDENTS

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in St. Louis, Missouri, December 1, 1942, the daughter of Ray and Helen Schumacher; sister of Raelene and Mary Linda; wife of Thomas E. Bray; mother of David, Sara and Amy DeVine; stepmother of Thomas, Jeff and Jason Bray.

Education: Graduated from Rosati-Kain High School, St. Louis, Missouri, in June, 1960; received the Bachelor of Science Degree from the University of Tulsa in May, 1982; received the Master of Science Degree from Northeastern State University in May, 1984; completed requirements for the Doctor of Education Degree at Oklahoma State University in May 1994.

Professional Experience: Rainbow Homes Director and Administrator, Parents Anonymous, Tulsa, Oklahoma 1984-85; Counselor and Aftercare Coordinator, St. John Medical Center, Tulsa, Oklahoma 1984-85; Chemical Dependency Inpatient Counselor and Therapist, St. John Medical Center, Tulsa, Oklahoma 1985-88; Chemical Dependency Outpatient Counselor and Therapist, St. John Medical Center, Tulsa, Oklahoma 1988-89; Family Therapist and Program Coordinator, St. John Medical Center, Tulsa, Oklahoma 1989-92; EAP Coordinator and Therapist, Tulsa Regional Medical Center, Tulsa, Oklahoma 1992-Present.

Achievements: Nationally Certified Alcohol & Drug Counselor, 1985; Licensed Professional Counselor, 1986; Nationally Certified Addiction Counselor, 1991; Licensed Marriage and Family Therapist, 1991.