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Identification of Psychosocial Variables Important for Persistence in College by Underprepared Students

by

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A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

Identification of Psychosocial Variables
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Patricia Hamilton Martin

Adviser: Professor Vera Paster

This study explored the ability to predict persistence toward earning a college degree by examining psychological variables as measured by the Edwards Personal Preference Schedule (EPPS), social variables as measured by the Mooney Problem Checklist (MPC), and attitudinal variables as measured by the Survey of Study Habits and Attitudes (SSHA) in 52 academically underprepared and financially disadvantaged students admitted to college in Fall, 1991 and 1992, through a special program called SEEK (Search for Education, Elevation, and Knowledge). Chi squares examined demographic factors and a MANOVA (Multiple Analysis of Variance) and univariate tests were employed to determine differences on the measures between students who persisted and those who dropped out. The latter scored significantly higher on the SSHA Educational Acceptance (EA) scale, the only measure to achieve significance, revealing that the intensity of the initial motivation was a counter indication of their persistence in college. The results are discussed as suggestive evidence of potential differences.

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The completion of my doctoral degree requirements has covered a long period of my life and at least a gazillion people have been helpful. I am truly grateful and I thank all of you in this way:

THANK GOD!

PHM
March, 1999

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Chapter One

Introduction

PERSISTENCE
Nothing in the world
can take the place of persistence.
Talent will not;
nothing is more common than
unsuccessful men with talent.
Genius will not;
unrewarded genius is almost a proverb.
Education will not;
the world is full of educated derelicts.
Persistence and determination alone
are omnipotent.
(Calvin Coolidge, 1933, p.255)

This study was designed to determine the extent to which the persistence necessary to earn a college degree can be predicted by the examination of certain psychological, social and attitudinal variables of the noncognitive domain. Academic variables of the

cognitive domain were neutralized by the selection of a population that consists of students of equally unprepared academic status on admission.

College graduation requires the completion of scholastic requirements that are generally academically challenging for the well prepared student. Yet, many students who are considered well prepared fail to make it to graduation. Approximately half of all students who begin college never graduate (Menand,1997; Tinto,1993). While dropout may be precipitated by many factors other than scholastic competence, it does signify less than necessary persistence to overcome whatever obstacles that interfere with continuing matriculation until graduation.

In the college setting, cognitive variables are the currency of exchange, with the price of a degree costing the completion of a specified course of study. Even though academic issues of the cognitive domain are of primary interest, and often the presenting problem in student counseling sessions, they are not necessarily determinative (Adams, et al., 1970; Breland, Escott, Martin, Rubenfeld,1987; Francis, Kelly & Bell,1993; Frost,1991;). It is the

psychosocial functioning of the noncognitive domain that often determines impact and resolution (Garni,1980; Patton & Robbins, 1982; Scheffler,1969; Schwitzer, Grogan, Kaddoura, Ochoa,1993).

It is a commonly held notion that most students leave college because of academic dismissal or the expectation of academic failure. However, the reality is that academic difficulty resulting in student departures from college represents only about 30 per cent of all students in the United States who leave before graduating (Tinto,1996). Even in counseling faculty meetings, this notion of scholastic incompetence holds sway. Discussions about retention often reveal that when initially underprepared students are not successful, cognitive abilities are deemed causative, regardless of their grade point averages. On the other hand, psychosocial variables are viewed as causative when gifted or initially academically well prepared students are not successful in their attempts to earn college degrees. It seems more likely that since underprepared students have not achieved the academic mastery that prepared students present, then psychosocial functioning or noncognitive variables may

contribute significantly to their success or failure, and perhaps, along a similar pathway, impact gifted or academically prepared students as well.

In the United States, academic capability for college is generally measured by the Scholastic Aptitude Test (SAT) and/or the High School Grade Point Average (HSGPA), (Bronner, 1997; Garcia, 1997). However, studies show that SAT scores and HSGPA do not predict college success or retention and, taken together, account for less than half of the variance in college student performance (Crouse & Trusheim,1988; Lavin,1965; Tinto,1982,1996). Never-the-less, SAT scores and HSGPA are still widely used to determine college admission. In view of this, it is incumbent upon scholars concerned with student matriculation, in college and beyond, to identify other factors important for success.

The factors to be examined in this study will consist of psychological, social and attitudinal variables of the noncognitive domain in a population of initially academically underprepared college students. One third of all students entering college in the United States are underprepared in the academic skills

areas of reading, writing and/or mathematics, and their numbers are likely to grow (Arenson, 1998; Knowlton,1995; U.S.Department of Education,1996). These students require a longer time to complete graduation requirements and have a greater than average risk of dropping out (Lavin, Alba, Silberstein, 1981). Since only 30% of students who leave depart for reasons of academic failure (Tinto, 1996), other factors contributing to their academic achievement should provide a powerful explanation of persistence and, perhaps, insight into why approximately half of all students in the United States who begin college never graduate (Menand,1997; Tinto, 1993).

The theoretical rationale that follows indicates why it is important at this time to focus on noncognitive domains in attempting to understand and predict student success. The rationale also indicates why it makes sense to study this domain in a population of students academically underprepared upon admission to college.

Rationale

The rationale for this study was based on the following premises: (1) Cognitive factors, as measured by SAT scores and HSGPA, explain only a small proportion of the variability in the academic performance and retention of college students (Applebome,1997; Bronner,1997; Crouse & Trusheim,1988; Lavin,1965; Tinto,1982, 1996; Tomlinson-Keasey & Little, 1990), especially in members of cultural or ethnic minority groups (Bennett & Okinaka,1990; Carty-Benia,1989; Edwards,1976; Lavin, Alba,Silberstein,1981; Pelavin & Kane,1990). (2) Studies have shown that specific noncognitive factors explain some of the variability in college students' academic performance and retention such as motivation (Astin, 1993; Lavin,1965; Seth,1995) and self concept (Gerardi, 1990; Mantzicopoulos,1997; Nixon & Frost,1990). (3) While noncognitive predictors of college performance and retention have been studied individually, few studied multiple theoretically relevant noncognitive predictors. Moreover, the few studies of this nature that have been reported have yielded contradictory findings (Arbona & Novy, 1990; Rogers, 1984; Tracey & Sedlacek, 1985, 1987). (4) Students underprepared

upon admission have not been the subject of studies examining the nature of their persistence to graduation. (5) Finally, it would be particularly beneficial to determine the factors that predict retention among college students who are academically underprepared upon admission. These students often require a longer time to complete graduation requirements which particularly tests their ability to persist.

An examination of the nature of this persistence may permit opportunity for greater understanding of issues of young adult development as well as college attrition and retention. These issues warrant further study.

Statement of the Problem

This study was designed to explore noncognitive factors that determine persistence to graduation of initially academically underprepared, economically disadvantaged college students. The noncognitive predictors include personality characteristics,

aspects of the student's personal life, and the student's attitudes toward curricula and teaching activities. The population of SEEK students was selected as the source of underprepared and disadvantaged students for this study.

Chapter Two

Review of the Literature

This study was designed to determine whether the academic performance and retention in college of initially academically underprepared, financially disadvantaged students can be predicted from a series of predictors including predictors drawn from the noncognitive domains of personality characteristics, aspects of the student's personal life, and the student's attitudes toward curricula and teaching activities. In this chapter, the literature relevant to these aspects will be reviewed. The literature has been organized under five major headings: (1) overview of rationale; (2) academic performance of financially disadvantaged and minority group students; (3) limitations of traditional

measures predicting academic performance and retention; (4) noncognitive factors associated with academic performance; (5) multivariate models for predicting academic performance and retention from cognitive and noncognitive variables.

Overview of Rationale.

The overview of the ratonale of this study indicating why it is important at this time to focus on noncognitive domains in attempting to understand and predict college student success, particularly in a population of students underprepared upon admission, has been organized into 5 sections, as follows:

(1)Cognitive predictors of college performance. SAT scores have been described by researchers as neither the best predictor of college academic performance, nor particularly strong predictors of such performance (Applebome,1997; Astin,1993; Bronner,1997; Crouse & Trusheim, 1988; Goldman & Widawski,1976; Thompson & Tyagi,1993; Tinto, 1982, 1996; Tracey & Sedlacek,1985). Goldman & Widawski (1976) suggested

the admission of applicants regardless of SAT scores because "use of the SAT produces increases in correct selection that range from modest to virtually nonexistent" (p.196). This was later described as a "trend" by Tracey & Sedlacek (1985) in their comparison by race "..the SAT scores showed little relationship to persistence for both races" (p.407). Eventually, Crouse & Trusheim (1988) described the SAT as "statistically redundant" (p.53). Currently, scholars are dubbing the present as "the golden age both of testing and of disputes over how schools test, what tests measure and how fair they are" (Applebome, 1997,p.E4).

Other research has shown Scholastic Aptitude Test (SAT) scores to be good predictors of college student performance, particularly in combination with High School Grape Point Average (HSGPA). Goldman and Hewitt (1976) reported that HSGPA typically explains between seven and 14 percent of the variability in freshman college grade point average. These investigators also noted that when SAT scores were added to regressions predicting freshman grade point average (GPA) from high school grade point average (HSGPA), an additional one

to seven percent of the variability in freshman GPA was explained.

Crouse and Trusheim (1988) confirmed this finding. They reviewed the available empirical evidence of the utility of SAT scores in predicting freshman academic performance. They concluded that SAT scores added significantly to the ability of HSGPA to predict freshman GPA: "The results of these studies show overwhelmingly that addition of the SAT to the high school record improves prediction of freshman grades...the SAT and high school record together increase the multiple correlation typically .06 to .08 over high school record" (p. 43).

No doubt, these predictors (SAT & HSGPA) explain a proportion of the variance in college student performance. However, the findings indicate a range of only one-fifth to less than half of the variability, leaving four-fifths or at least half of the variability unexplained.

With respect to the use of these measures to predict the college academic performance of minority group students, a number of important issues have been presented. Even though the SAT's contribution to the

prediction of freshman GPA is limited, its use in admissions decisions appears to have a very significant negative effect on applicants from cultural and ethnic minority groups. Black and Hispanic high school students tend to score lower on SAT exams than white students (Miller,1995, 1996; Steele,1997). Therefore, the use of SAT cut-off scores in admission decisions guarantees that colleges will admit proportionately fewer students from these minority groups (Bronner, 1997). In fact, the admission of fewer students from particular groups was an objective when standardized testing was initially introduced to the admission process:

> ...college enrollments in the United States increased nearly five times as rapidly as the general population between 1890 and 1924 ... At Columbia University, the first college to use intelligence tests for admissions, administrators and faculty in the first two decades of the twentieth century began to fret over who these students were. By 1910, about half the children attending New York City public schools were first- or second-

generation immigrants, many of whom were eastern European Jews ... By 1915, a substantial portion of Columbia's undergraduates were immigrant eastern European Jews from New York City. The dean of Columbia College feared that the influx of Jewish students might drive away Columbia's natural constituency of students from 'homes of refinement.' Many of Columbia's faculty and administration considered the eastern European Jews socially backward, clannish, and hostile to upper-middle-class values. They were scorned as achieving far beyond their native intelligence. Many at Columbia therefore worried about the academic caliber of the student body, its increasing parochialism , and a social environment increasingly apathetic to Columbia's traditional clientele ... Nicholas Murray Butler, Columbia's president at this time, ... hoped Columbia's use of intelligence tests would limit the number of Jewish students without a formal policy of

restriction (Crouse & Trusheim,1988,p.19-20).

Steele (1997) observed that among African American, Hispanic, and Native American college students, "there was sizable overprediction (underperformance) in virtually all academic areas,...at each level of preparation, as measured by the SAT, something further depressed the grades of these groups once they arrived on campus" (p.615). Other studies have reported similar results. That is, actual freshman academic performance was typically worse than predicted on the basis of the SAT test scores (Jensen, 1980, Steele, 1992, 1997; Steele & Aronson, 1995).

There have been a number of different explanations for the overprediction of minority student achievement by the SAT. It has been argued that underachievement may result from the anxiety associated with the knowledge that one is a potential target of prejudice and stereotypes (Allport, 1954; Carter, 1991; Goffman, 1963; Steele, 1990). Steele (1990) suggested that after a lifetime of exposure to negative images of their

ability, minority students may develop an "inferiority anxiety." This anxiety can be exacerbated by a variety of race-related cues in the environment, and the anxiety may in turn lead minority students to blame others for any academic difficulties that they may experience, or the students may actually do worse than they are able to do because they act to fulfill the prophecy that they are not expected to do well. This in turn may lead these students to not only underutilize their abilities, but also to avoid opportunities potentially available to them for scholastic help.

Regardless of the specific theory or theories one employs to understand the overprediction of minority students' academic performance, it seems clear that noncognitive factors may provide a significant domain for examination. These considerations further justify a study examining psychosocial variables of the noncognitive domain as factors important for successful persistence in college, particularly for ethnic or cultural minority groups and for other nontraditional students.

(2) Noncognitive factors. Numerous studies have

identified a number of specific noncognitive factors that are associated with academic achievement and retention. These factors include: (1)motivation (Astin, 1993; Balkin, 1987; Dweck, 1986; Lavin, 1965); (2) self-concept (Campbell,1990; Gerardi, 1990; Mantzicopoulos, 1997; Marsh, 1990; Nixon & Frost, 1990; Pearlman, 1988; Steele, 1997); (3) locus of control (Chandler, Sibel & Spies, 1990; Edwards, 1976; Gadzella, Williamson & Ginther, 1985; Laffoon, Jenkins-Friedman, & Tollefson, 1989); (4) social supports and relationships (Halle, Kurtz-Costes & Mahoney,1997; Lavin, 1965); (5) future orientation (Bell, 1992; Katchadourian & Boli, 1994); and optimism (Marshall & Long, 1990; Scheier & Carver, 1987; Scheier, Weintraub, & Carver, 1987, Seligman, 1991; Snyder, 1994). The literature on these predictors will be considered in greater detail later in the chapter. At this point, it is noted that, individually, these noncognitive predictors appear to explain portions of the variability in college academic achievement that are comparable to those explained by cognitive measures such as SAT scores. This also suggests that noncognitive domains such as

these listed should be explored as a possible source of valid and reliable predictors of college academic achievement for students from both majority and minority ethnic/cultural groups.

(3) Multivariate predictors. Since no one predictor of college academic achievement appears to explain a substantial portion of the variability in college academic achievement by itself, it appears that investigators would do well to construct prediction models involving multiple predictors from both the cognitive and noncognitive domains. However, a review of the literature revealed only a few studies in which multivariate models for predicting college academic performance were tested. Furthermore, the results reported in these studies were inconsistent.

Rogers (1984) and Tracey and Sedlacek (1985,1987) tested a model for predicting freshman academic performance that included a series of noncognitive factors measured by the Noncognitive Questionnaire (NCQ). These factors included Certainty of Academic Plans, Support for College Plans, Community Involvement, Long Term Academic

Goals, Perseverance, Expected Academic Difficulty, Academic Familiarity, and Leadership. These studies indicated that a combination of noncognitive factors predicted freshman GPA significantly among both white and black students. Tracey and Sedlacek (1985, 1987) also reported that these noncognitive variables predicted college retention in both groups.

However, a study reported by Arbona and Novy (1990) yielded contradictory results. They obtained both SAT scores and Noncognitive questionaire (NCQ) scores for large samples of black, Mexican-American, and white entering freshman. They found that among black students, neither the SAT nor any of the NCQ scales were significant predictors of students' cumulative GPAs at the end of the first year. Among the Mexican-American students, scores on the math section of the SAT and scores on Certainty of Academic Plans both predicted GPA. Among white students, both the SAT verbal score and the SAT math score predicted GPA, as did Academic Familiarity. These limited and contradictory findings suggest that more research

needs to be done in order to identify the cognitive and noncognitive predictors of academic performance and retention for college students, especially students from minority ethnic and cultural groups.

(4)Academically underprepared students. Of the nearly two million students who begin college each year in the United States, approximately one-third are underprepared in the sense that they have not sufficiently mastered basic academic skills such as reading, writing, and mathematics, to master college level work (Arenson, 1998; Knowlton, 1995; U.S. Department of Education, 1996). The admission of these students to the university continues to fuel extensive debate. In spite of the controversy about the presence of underprepared students in the City system and in other American universities, studies show that their numbers are likely to grow (Arenson, 1998; Knowlton, 1995). Academically underprepared students may be expected to be at risk of dropping out of college because of their initial low skill level, but for many other reasons as well. However, many overcome these obstacles to complete degree requirements. They catch up.

The case of academically underprepared students may be illustrated with reference to students in the Search for Eduction, Elevation, and Knowledge (SEEK) program at the City University of New York (CUNY). In 1966, the New York State Legislature mandated the establishment of the SEEK program in the CUNY system because "during the most recent decades, a combination of political and socioeconomic developments led to a national commitment to deal with the historic problems of poverty and race" (Piesco & Podell, 1978, p.600). The program was considered a success and four years later, in 1970, an open admissions policy was implemented (Berger,1971,1977).

The SEEK program was designed as a support system to meet the needs of various ethnic minority youth, mostly African American, who had attended basically segregated New York City high schools (Lavin & Silberstein, 1981). Their mostly inferior primary and secondary school educations (Berger, 1968) had resulted in systematic exclusion (Piesco & Podell, 1978) from the City's higher education system, a phenomenon extensively examined by Ogbu (1978,1986) and discussed later in

the chapter. Typical **SEEK** students graduate from City high schools with fewer skills. It is required that they have a high school average lower than 80, (SEEK By Laws, Office of Special Programs, 1993).

SEEK students typically require at least six years to complete degree requirements with seventy to eighty percent dropping out before they attain a degree (Annual Report, Office of Special Programs, CUNY, 1970-71, 1984-85, 1990-91). Of those who leave, however, approximately one third to one half were in good academic standing at the time of departure (Francis, Kelly & Bell, 1993). This has also been observed by other researchers (Bennett & Okinaka, 1990; Berger & Johnson, 1966). It is not to be ruled out that some of these students go on to other insitutions of higher learning, but comprehensive follow-up information has not been gathered.

The longer time to graduation for **SEEK** students is first due to their low initial skill levels. **SEEK** students are required to take remedial courses to prepare them to take credit-bearing college courses. The remedial courses

that must be taken may require several semesters to complete. When they begin to take full credit-bearing courses, these students frequently carry the minimum course load of twelve credits. Some **SEEK** students may carry the minimum number of course credits in order to do well in the courses they do take.

Another set of factors that may contribute to a longer time to graduation or to dropping out is the fact that **SEEK** students tend to experience a wide range of time consuming demands unrelated to their academic efforts. Many **SEEK** students have parenting responsibilities, or the financial, physical and/or social responsibility for parents and/or younger siblings (Francis & Kelly, 1988; Murtha, Protach, & Kaufman, 1983; Omolade, 1986; Francis, Kelly, & Bell, 1993). These responsibilities suggest that the personal concerns and problems experienced by students may also have an impact on the likelihood that they will persist until graduation.

Financial factors may also contribute to the longer time to graduation for **SEEK** students.

Economic need is a criterion for acceptance into the program. For example, the total annual income of an independent student (at least 21 years old and not living with or receiving financial support from parents or guardians) may not exceed $7,500.00; $20,000 for a family with four members (SEEK By Laws, Office of Special Programs, CUNY, 1993). Financial aid is provided to assist the students, but many still need to be employed, and some work full time (Francis, et al, 1988,1993).

Economic disadvantage has likely contributed to the student's academic skills deficits resulting in the need for remedial courses before actual credits towards one's degree can be attempted. This makes the objective of achieving the college degree a more distant and difficult to reach goal. As suggested by Lavin and Crook (1990), some SEEK students may decide to leave college because they begin to realize that it may take six to eight years to accumulate enough credits to reach graduation. For those students who are successful in bringing their skills up to the level that permits them to compete in more advanced college courses, however, the salience of persistence as an

important factor in the completion of degree requirements appears axiomatic.

(5) Persistence/ college student development. A potential obstacle for **SEEK** students may derive from the fact that many are typically the first members in their families to attend college (Lavin, 1983; Lavin & Crook, 1990; Ogbu, 1978,1986; Steele, 1992). On the other hand, this fact is articulated by some as a part of the motivation to attain a degree (Francis, Kelly, & Bell,1993) and provide a relatively idealized environment for resolving conflicts in growth and development (Erikson, 1968, 1982; Wittenberg,1968), especially conflicts related to typical experiences of college students (Chickering & Reisser, 1993). However viewed, it means that **SEEK** students are likely to be unfamiliar with the academic demands of college and that such knowledge may affect attitudes toward academic endeavors that may be particularly important predictors of retention.

The obstacles faced by **SEEK** students would appear to make their persistence to graduation an extraordinary accomplishment. It is suggested that

noncognitive, personal characteristics such as optimism, perseverance and achievement motivation may be significantly related to the likelihood that a given **SEEK** student will be graduated (Gerardi, 1990). Determining the factors that differentiate **SEEK** students who persist to graduation from those who drop out would highlight these issues for similar economically impoverished and minority persons who have not had access to adequate elementary and secondary education but, initially have the motivation for higher education. What helps and what hinders their achieve ment of these goals?

Academic performance of financially disadvantaged and minority group students.

Ogbu (1978, 1986) considered the problem of poorer grades in the academic performance of financially disadvantaged and minority group students. He discussed several of the traditional explanations for this phenomenon, including heredity, cultural deprivation, culture conflict, institutional

deficiency, and lack of equal educational opportunity. These explanations will be critiqued in the paragraphs that follow, after which some of the more recent theoretical explanations will be discussed.

Heredity. Differences in IQ that favor whites are attributed by some to environmental differences, to test bias and by some (Jensen, 1961,1973) to inferior genetic endowments for certain kinds of intellectual skills. Ogbu (1978, 1986) did not accept the hereditary explanation of the IQ differential, because "no studies have empirically demonstrated that gene-controlled deficiencies in mental abilities, such as inbreeding, mutant genes, or chromosomal abnormalities, are found in higher proportions among blacks than among whites" (1978, p.60). Ogbu advanced the contrary notion that IQ differences reflect the differences in the treatment afforded by society to white and black persons. In support of this position, Sternberg's (1996) discussion of inheritable traits notes "Phenylketonuria has a heritability of 1 (i.e., it is completely heritable), but its symptoms (such as mental retardation) can be alleviated by a wholly environmental intervention (withholding of

phenylalanine from the diet from the time of birth."(p.14) Sternberg's note suggests education as an intervention that parallels the diet intervention for lingering genetic pronouncements regarding intelligence and he concludes that "Our ability to modify intelligence, therefore, is not determined in the least by the heritability of intelligence"(pp.14-15).

Cultural deprivation theory. The cultural deprivation explanation of the inequality in academic achievement between middle class white and financially disadvantaged minority youth posits that poor minority youth tend to come from home and neighborhood environments which do not provide sufficient stimulation for linguistic, cognitive, and social development. A prime example of the cultural deprivation theory is the discussion of Compensatory education for cultural deprivation provided by Bloom, Davis, and Herr (1965). These authors described culturally deprived students as those who grew up in "homes which do not transmit the cultural patterns necessary for the types of learning characteristic of the schools and the larger society" (1965, p. 4).

They went on to note that "a large number of Negro children, especially those from homes with functionally illiterate parents, are likely to be culturally deprived" (1965, p. 5). According to Powerledge (1967) this theory of cultural deprivation provided the primary impetus for compensatory education programs such as the Headstart Program, which sought to make up for the presumed deficiencies of the home so that the children would perform in school on the level of and in the context expected of white middle-class children. In New York City, because "...the previous deprivations incurred by these groups interfered with the realization of their academic potential. ...The SEEK program (Search for Education, Elevation and Knowledge) at the City University of New York was one such compensatory effort" (Piesco & Podell, 1978, p.600).

Ogbu (1978) criticized cultural deprivation theory on the basis that this theory "erroneously labels many aspects of black childhood experiences as 'pathological' and thus generates 'remedial programs' dedicated to the elimination of the presumed pathologies" (p. 46). Ogbu further argued that even

though the remedial programs spawned by this theory "have not generally proved successful in achieving their goals, they continue as the dominant approach to change in ghetto schools" (p. 46). As Spencer (1985) notes however, "Referred to here are the negative stereotypes and values about non whites which are communicated as incipiently and saliently as the gender stereotypes inculcated beginning from the first day of life (pp.224-225)." Her discussion suggests a more critical role in that "American culture and social institutions produce diverse psychological outcomes for different groups and individual members (p.225)".

Spencer's work takes particular regard of culture and her view of difference eclipses deprivation theories:

> ...the fact [is] that the operation of the American opportunity structure differed for certain non White groups (e.g., black and Native Americans). Given this historical variance, it would be expected that the cognitive operations or structures by which each group's children construe, or come to have meaning of the world would necessarily

> vary. These structures will likely differ on the basis of implicit knowledge that becomes explicitly interpreted in the course of cognitive maturation and accumulated social experiences (p.224).

Culture conflict. Ogbu discussed two variants of culture conflict theory, both of which suggest that financially disadvantaged minority children often fail to do well in school because they grow up in a culture that is different from the mainstream culture. The theory contends that minority "children...acquire values, attitudes, and learning styles within their culture that are different from and in conflict with those required for success in the public schools and in wider society" (Ogbu, 1978, p. 47).

The first variant of culture conflict theory discussed by Ogbu emphasizes the failure of financially disadvantaged minority culture to provide the children with the "white middle-class skills necessary for school success" (1978, p. 47). One such set of skills is that of standard language skills. Inkeles (1968) argued that white middle-class children typically arrive at school with well-developed language skills,

and that the school "offers rewards to the middle class child when he arrives at school for what he already knows, (whereas) it is likely to greet our Harlem Black boy with horror for what he does not know and cannot do with language" (Inkeles, 1968, p. 60). Subsequently, academic success may not be recognized, really, except as a derivative of the horror response.

The second variant of culture conflict theory noted by Ogbu emphasizes the failure of the schools to make use of the skills which minority, particularly black children do bring to school. Some proponents of this viewpoint favor the use of "black English" in the schools but many advocate an increase in the emphasis on black culture in the curriculum. They argue that the recognition of black culture will reduce the sense of alienation between the child's world and the world of school, and promote positive recognition resulting in boosted self-esteem among black students, all of which in turn may be expected to have a positive impact on their academic performance. Ogbu (1986) questioned the logic of the black English argument, on the ground that training black children in "black English" is not likely to be sufficient to help them to

function effectively as adults in the wider society.

Institutional deficiency. The institutional deficiency argument maintains that public schools tend to favor "middle class and upper class, non-minority children and to suppress the aspirations of children from disadvantaged groups" (U.S. Senate, Select Committee, 1972, 129). Numerous mechanisms have been cited as promoting the academic failure of black children, including the assignment of black children to separate and inferior schools, the negative attitudes, insensitivities, and low expectations of teachers with respect to black students, tracking and testing policies, and the use of inadequate curriculum. The continuing cause and effect is explained by Spencer (1985):

> American culture and social institution produce diverse psychological outcomes for different groups and individual members. European values central to American heritage have potentially deleterious effects for excluded or unassimilated minorities in America (e.g., blacks, Hispanics and American Indians). It is not surprising that these groups have

> remained outside the mainstream. They share several characteristics with each other: characteristics which distinguish them from EuroAmericans. Each group: (1) is racially different; (2) has attempted to maintain aspects of their own cultural heritage; and (3) did not become Americans by choice (p.225).

The latter, though not experienced by current generations, remains alive in many cultures, often powerful and evocative (Bell, 1992).

Lack of equal educational opportunity. Ogbu (1978) differentiated between the institutional deficiency argument, which states that schools actually promote the academic failure of financially disadvantaged minority children, and the educational inequality argument, which does not question the suitability of existing school programs, but does question whether there is adequate access to the best of these programs. Guthrie, Kleindorfer, Levin, & Stout (1971) reported the results of a meta analysis of 17 studies that examined the relationship between the resources available to the school system and students' academic achievement. They concluded that there was

adequate evidence of a positive relationship between these variables. Since communities vary widely with respect to per pupil expenditure on education, and since minority students are more likely to attend schools in economically depressed inner cities and rural areas, minority students are not as well prepared for college as their middle class white age peers, simply by virtue of having unequal access to the best educational opportunities.

However, Ogbu (1978) argued that the unequal educational opportunity explanation is not sufficient. He noted that "it cannot be shown that better school resources are always associated with higher pupil performance or that poorer resources are always associated with lower performance. Other factors are also involved" (1978, p. 53). Ogbu suggested that the concept of equal educational opportunity has been used in a very narrow sense, to refer simply to "equality of access to school resources and the use of these resources to enable children from non-middle-class and nonwhite backgrounds to perform like white middle-class children in school" (1978, p.53).

Ogbu went on to argue that this definition of

equality says nothing about the incentives that society offers children to encourage maximum efforts in their schoolwork. He argued that "children do not succeed in school simply because they come from middle class family backgrounds or attend well-equipped schools, nor do they perform well in school simply because they have high IQs or favorable attitudes...An important determinant of school performance is what children and their parents or community expect to gain from their education in adult life" (1978, p. 54). Thus, Ogbu suggested that because education has not historically provided minorities with equal access to jobs, wages, and other benefits traditionally associated with education, there is little incentive to perform well in school.

Ogbu noted that black women tend to have higher IQ scores than do black men, and he cited studies reported by Clark (1967) and by Harrington (1967) which concluded that our society generally provides greater opportunity to black women than to black men in terms of acceptance, education, and employment. He suggested that the greater opportunities available to black women over the more threatening black

male by the predominantly white society led to differences in expectations regarding the potential value of intellectual and academic pursuits, and corresponding differences in the socialization of female and male children. Ogbu suggested that a parallel process could be used to provide at least a partial explanation for observed differences in IQ between blacks and whites. A deeper understanding of this phenomenon is rooted in the fact that laws established in the early 1800's prevented the teaching of reading and writing to slaves (Fishel & Quarles, 1970).

Thus Ogbu (1978, 1986) clearly did not consider any of the traditional explanations of the academic gap between whites and financially underprivileged minorities to be adequate, a position supported by other researchers (Spencer, 1987; Sternberg, 1996) and pertinent to the particular academic journey and performance gap under scrutiny here, that of the performance of initially underprepared college students with specified economic limitations.

Research conceptualizing differences in academic achievement reflect developmental experiences that

appear relevant and emerge long before students graduate from secondary school and go on to college. The impact appears even earlier as the parent of an eight year old discovered: "So,... I asked my son, 'what is the citywide test for?'" The child's response was "It's to see if we are smart enough to get into college" (Baumel,J. 1997, p.21). Many parents are indeed aware of the early impact such that to enroll their children in the kindergarten of a good public school, they will spend the weekend lined up in the "driving rain" (New York Times, 1998, March 10, p.B4).

Steele's (1997) suggestion of two other factors contributing to the underachievement of minority college students appears to support the conception of long emerging differences. Both are associated with negative stereotypes held by society with respect to the intellectual ability and academic potential of minority group members. Both would seem to require multiple experiences over time to be incorporated and have an impact. The first of these factors has to do with the internalization of such stereotypes. According to Steele and others, the long history of constant exposure to negative

stereotypes about themselves can cause members of prejudiced-against groups to internalize the stereotypes resulting in a sense of inadequacy which becomes part of their personality (Fordham & Ogbu, 1986; Steele, 1997).

The second factor is the phenomenon of stereotype threat (Steele, 1997; Steele & Aronson, 1995). According to this second theoretical explanation, exposure to the social stereotypes that they are intellectually inadequate and unlikely to succeed in college represents a serious personal threat to students from minority groups. They tend to defend themselves against these stereotypes by "disidentifying" themselves with academics and basing their personal identities in other areas of endeavor. The disidentification with academics protects the minority group student from the severe threat to self-esteem associated with the possibility of not succeeding in college, but it also undermines sustained motivation, with the result that the student actually does underperform in relation to the levels of achievement that might be predicted on the basis of aptitude alone. Ironically, it is the SEEK student's

history of underperformance, in part, that permits college admission. Exposure to this stereotype threat is built in and constant. How do we, therefore, understand when without adequate preparation, the student is motivated enough to begin college, and capable enough to matriculate and persist to graduation?

Limitations of traditional measures predicting academic performance and retention.

The most widely used measures for both the prediction of college success and retention and the admission of students to college are the High School Grade Point Average (HSGPA) and scores on the Scholastic Aptitude Test (SAT). In spite of their limitations (Crouse & Trusheim, 1988; Lavin, 1965; Tinto, 1982, 1996), continued reliance on these measures may simply reflect assumptions derived from their nomenclature; both HSGPA and SAT scores are typically referred to as measures of academic or "cognitive" ability. However, they both also appear to reflect motivation, effort, social support, social skills and projected expectations of teachers, as

well as the capability of the student.

Garcia's report, (1997), examining the SAT revealed it to be "at best 25 per cent accurate when it comes to predicting the variation in first-year college grades, and they have not been shown to predict whether someone will graduate from college" (p. A39). Garcia further offered that the SAT's correlate most highly with the income and educational level of the students' parents.

Bronner (1997) considered the current status of testing in college admissions policies, as well as the impact of such tests on the admission of students from ethnic and cultural minorities. According to Bronner, on the average, black and Hispanic students still tend to score lower than white students on tests such as the SAT. He reported these differences sometimes to be relatively independent of potentially confounding factors, such as socio-economic status.

Bronner also noted that the recent legal challenges to affirmative action programs raise the prospect that tests like the SAT will become even more important factors in college admissions decisions than they have been in the past, and that reliance

on such tests could make it difficult or impossible for minority group youngsters to gain admission to many colleges. Moreover, Bronner stressed the irony of such an eventuality, in view of the fact that tests such as the SAT are not particularly strong predictors of either college students' academic performance or their career success after college. Bronner suggested that admissions personnel tended to favor the use of the SAT at least in part because it is convenient. The SAT yields a numerical score which can greatly simplify and expedite the process of making admissions decisions, due to the possibility of setting a specific minimum cut-off score. Then applicants with lower scores can be rejected immediately, without taking the time necessary to consider other factors about the particular student that may be related to the student's potential academic or vocational success, but may not be quantified conveniently.

It has also been suggested that those responsible for admissions decisions may be encouraged to rely on tests such as the SAT and the GRE because of the "publication reason" (Sternberg & Williams, 1997,

p.631). This term refers to the idea that when the average scores obtained by students in various colleges and graduate programs are published routinely, there is pressure on university personnel to keep these scores high, in order to retain their competitive edge relative to other institutions competing for the same pool of students. Students considering applying to various programs tend to use these data as a guide to the quality and prestige value of the programs.

Recently, scholars have begun to recognize the Scholastic Aptitude Test (SAT) as an achievement test rather than an intelligence or aptitude test as its name indicates:

> 'The SAT is an achievement test rather than an intelligence test,' said Dr. Ulric Neisser, a Cornell University psychologist and head of a recent American Psychological Association task force on human intelligence. It is aimed at what kids learned in school. Its perfectly possible for kids to get smarter in an IQ sense - especially in terms

> of logical reasoning and analysis - and yet learn less and less of the substantial curriculum (Johnson, 1998, p.16).

Several studies have indicated that HSGPA is the best single predictor of freshman college grades (Astin, 1993; Balkin, 1987; Barrilleaux, 1972; Bennett & Okinaka, 1990; Edwards, 1976; Emmeluth, 1979; Hazard & Danner, 1974; Talbot, 1990). However, other investigations have emphasized that the magnitude of the relationship between HSGPA and college GPA is not very strong, either for general student samples or for samples of students from specific ethnic, cultural, and socio-economic status groups (Donaruma & Balkin, 1979; Goldman & Hewitt, 1976; Lichtman, Bass, & Ager, 1989; Pfeifer & Sedlacek, 1971; Thompson & Tyagi, 1993; Tinto, 1975; Tomlinson-Keasey & Little, 1990).

For example, Goldman and Hewitt (1976) reported correlations between HSGPA and freshman college GPA ranging from .27 to .37 for large samples of black (r = .27, n = 272), Mexican American (r = .37, n = 188), Asian (r = .35, n = 852) and white (r = .36, n = 4259)

college students from four campuses at the University of California. These correlations were all significant statistically, indicating that HSGPA does have some validity for the prediction of freshman college academic performance. However, the magnitudes of these correlations indicate that HSGPA explains only "...7 to 14 percent of the variance in freshman academic performance" (p.110). In addition, a study of differences in attrition patterns between Black and White students (Lichtman, Bass & Ager,1989) presented a "rather striking, counter intuitive finding ...among students with high school GPAs below 3.25 (out of a possible 4.0), approximately 1.4 Blacks drop out for every White who leaves. For those with high school GPAs of 3.25 and above, the ratio rises so that 1.88 Blacks drop for every White who drops" (p.6). Their analysis of college GPAs resulted in similar findings and they suggested examinations of other variables in areas such as financial, cultural and familial to determine causes for these differences.

Clearly one could not expect to predict the freshman GPA of a particular student very accurately on the basis of HSGPA alone. However, the available data

does seem to indicate that HSGPA explains more of the variance than do the SAT scores. The addition of SAT scores to HSGPA typically results in the explanation of significant additional variability in college grades (Crouse & Trusheim, 1988). That is, when college grades are regressed on both HSGPA and SAT scores, the predictions derived from the regression equation are more accurate than those derived from the regression of college grades on HSGPA alone.

This conclusion is consistent with the findings reported by Goldman and Hewitt (1976). When they added the SAT Verbal and the SAT Math scores to HSGPA in predicting freshman GPA, they found that among Black students the correlation increased from .27 to .33. Among Chicano students, the correlation rose from .37 to .38. Among Asian students, the correlation rose from .35 to .42. Among whites the correlation rose from .36 to .43. These increments are very much in line with the range of increments reported by Crouse and Trusheim (1988).

However, even with the additional variability in freshman grade point average

attributed to the combination of SAT scores and HSGPA, the magnitudes of the observed multiple correlations are not great. In the case of the Goldman and Hewitt (1976) study, the proportion of variability in freshman GPA that was explained in the four student samples ranged from 14 to 18 percent, which is still modest. The majority of the variability in college students' academic performance remains unexplained by these predictors. This same conclusion has been reached by several other investigators (Carty-Benia, 1989; Edwards, 1976; Pelavin & Kane, 1990).

These conclusions would appear to suggest that predictors other than HSGPA and SAT scores should be identified. Reliance on these measures indicates that the educational system in the United States reflects an ideation symptomatic of a perspective that conceives of cognitive ability in static rather than dynamic terms; as a substance rather than a process (Bernstein, 1975). In particular, therefore, the limitations observed with respect to these traditional cognitive predictors appear to warrant the investigation of the noncognitive variables that make up the fifty to eighty percent of

the unexplained variance in the prediction of college academic performance and retention, for minority and non-minority students alike. The section of the review that follows considers the existing evidence that certain noncognitive factors do, in fact, predict college performance.

Noncognitive factors associated with college academic performance and retention.

Interest in noncognitive factors associated with college academic performance and retention may be traced to Nicholi (1967) who studied undergraduates who dropped out of Harvard University. He reported that within this group, emotional conflicts and psychiatric disorders such as depression were the best predictors of dropping out. He observed that these depressed students "become withdrawn and retarded and cannot study. Academic failure may then increase the depression to produce a cybernetic feedback (p.110). In his formulation, "depression was posited as the most significant causal factor in the decision to leave college. The depression is related not to object loss but to disparity between the ideal self as a uniquely

gifted intellectual achiever and the real self as one of thousands of students struggling in a competitive and threatening environment (p.112)." He suggested that his findings conflict "with prevailing opinion which states that `persistence in college depends primarily on intellectual ability'" (p.108).

Tinto (1975) expanded the scope of interest in noncognitive predictors of college persistence, suggesting that "ability, however measured, is but one of a number of individual characteristics found to be associated with college persistence" (p. 101). Tinto (1993) went on to emphasize the particular relevance of finances in predicting retention in college. He suggested that many students make the decision not to attend college at all because they do not believe that they can afford it, and he argued that this is a de facto form of dropping out. He suggested that students from disadvantaged groups are most likely to decide not to attend college or to drop out before graduation. He argued that finances were more likely to lead a student to drop out during the first year or two of college, when the goal of graduation still appears quite distant. It should be noted that

the latter observation is particularly relevant to the underprepared student whose time until graduation is increased by the necessity of taking remedial courses prior to beginning credit-bearing coursework.

A review of the literature that has been reported relevant to noncognitive predictors has indicated that the following factors have an impact on college academic achievement and retention: (1) motivation (Astin, 1993; Balkin, 1987; Dweck, 1986; Lavin, 1965; Seth, 1995; Talbot,1990; Villerand & Bissonnette, 1992); (2) self-concept (Campbell, 1990; Gerardi, 1990; Mantzicopoulos, 1997; Marsh, 1990; Nixon & Frost, 1990; Pearlman, 1988; Steele, 1997); (3) locus of control (Chandler, Sibel & Spies, 1990; Edwards, 1976; Gadzella, Williamson & Ginther, 1985; Laffoon, Jenkins-Friedman, & Tollefson, 1989); (4) social supports and relationships (Halle, Kurtz-Costes & Mahoney, 1997; Lavin, 1965); (5) future orientation (Bell, 1992; Katchadourian & Boli, 1994); and optimism (Marshall & Long, 1990; Scheier & Carver, 1987; Scheier, Weintraub, & Carver, 1987; Seligman,1992; Snyder,1994). The paragraphs that follow consider each of these noncognitive factors in

turn.

Motivation. Lavin (1965) suggested that achievement motivation may be an important determinant of academic success. He noted that achievement motivation was typically measured either by projective tests, such as the Thematic Apperception Test (TAT), or by paper and pencil questionnaires, such as the Need Achievement subscale of the Edwards Personal Preference Schedule (EPPS). Lavin reviewed a number of studies of the relationships between these measures and the academic performance of college students. He concluded that some of the studies showed significant positive relationships between achievement motivation and academic performance, while others showed nonsignificant relationships. In one study cited, McClelland (1958) found that the achievement motivation score derived from the TAT was correlated .39 with grades in college among a group of male undergraduates. This same study showed a correlation between college GPA and intelligence of .55, and a multiple regression coefficient of .63 when college GPA was predicted from a combination of intelligence and motivation to achieve. McClelland's

studies (Johnson, 1970) on the social origins of high achievement motivation identified early independence training in child-rearing practices, regardless of culture (Johnson, 1970).

Lavin (1965) cited six studies that reported significant positive relationships between academic performance in college and scores on the Need Achievement scale of the Edwards Personal Preference Schedule (EPPS). Therefore, the use of the EPPS is positively indicated. It will be discussed in the next chapter. For now it is interesting to note that the TAT, published in 1935, was created by Henry Murray along with Christina Moran. Murray's theoretical research (1938), clearly reflective of the psychodynamic view, is the basis for the EPPS test items.

Balkin (1987) studied a sample of 112 undergraduates enrolled at the John Jay College of Criminal Justice in New York City. He attempted to predict their cumulative GPA from their HSGPA and from three personality measures derived from the Adjective Check List (Gough & Heilbrun, 1983). These scales were Achievement, Aggression, and Deference. The results of

this study indicated that in this particular sample, the variable correlating most highly with cumulative college grade point average was achievement motivation (R = .39), accounting for 15 % of the variance. The addition of HSGPA to Achievement to the regression equation predicting college GPA resulted in a multiple correlation of .50. Thus, HSGPA explained an additional 10 % of the variance in college grades (R-squared = .25). Note that this study found that this personality factor, achievement motivation, was a more powerful predictor of college academic performance than was HSGPA.

Several investigators have described the concept of the "intrinsic motivation to learn." According to Seth (1995), this construct is an enduring personality disposition that differentiates out of general intrinsic motivation and is characterized by curiosity, self-determination, competence, and persistence. Several other studies have indicated that intrinsic motivation to learn is a significant predictor of academic achievement in college. Talbot (1990), concluded "...that in any case intrinsic motivation reveals something about students'

ability to find meaning in their studies. Need for cognition may be a form of intrinsic motivation"(p.57). Studies by other researchers support these conclusions (Dweck, 1986; Villerand & Bissonnette, 1992).

These findings suggest that it would be wise for investigators concerned with predicting academic achievement and persistence in college to include a measure of achievement motivation in their prediction models.

Self-Esteem, Self-Concept and Academic Self-Concept. Self-esteem has long been viewed as a positive predictor of academic success. Currently, however, "research is indicating that self-esteem is not in and of itself a strong predictor of success. Criminals and juvenile delinquents, it turns out, often have high self-esteem, using the traditional measurements" (Johnson, 1998, p.F7).

Campbell (1990) distinguished outer self-esteem as the "temporary feelings of self-regard that vary over situations, roles, feedback, events, and the reflected appraisals of others" from inner self-esteem, "a global personal judgment of worthiness that appears to form relatively early in the course of development,

remains fairly constant over time, and is resistant to change" (p.539). She discussed self-esteem as an aspect of the self-concept, as opposed to other studies that utilize these concepts interchangeably, such as Demo and Parker (1987). In her view, self-esteem is the affective experience, how one feels about the self, while self-concept is most clearly understood as the knowledge experience, what one knows (believes/thinks) about the self. Her research demonstrated that clarity of self-concept mitigated the impact of positive and negative feedback on students with high or low self-esteem. She suggested that low self-esteem ratings of subjects might represent a "more cautious self-presentational style ... their self-definitions are more confused or uncertain, an intrapsychic uncertainty that could easily lead them to adopt a more cautious self-presentational style" (p.544).

Studies on self-esteem and self-concept have led researchers to the development of additional conceptions of the self-concept. Global self-concept refers to one's overall evaluation of the self. In addition to global self-concept, one also holds specific attitudes about the self in regard to

particular domains of behavior. For example, one may have a highly favorable self-concept with respect to athletics or social relationships, but a much less favorable self concept with respect to academics (Nixon & Frost, 1990).

Nixon and Frost (1990) focused on self-concept specifically as it applies to the academic domain. They studied 47 male and female students at a public 4-year university in Tennessee. They administered the Study Habits and Attitudes Inventory to these students. This instrument measures several different noncognitive domains relevant to academic undertakings, including work habits, goal setting, long term goals, and academic self-concept. The investigators reported that academic self concept was a strong predictor of cumulative college GPA (r = .56), as was goal setting (r = .58). Each of these two predictors was related more strongly to college GPA than were any of the items measuring specific study habits.

Nixon and Frost (1990) interpreted these findings in terms of the notion of the self-fulfilling prophecy. They suggested that for success

in college, it is very important that students believe in their own potential. This study, however, does not address the issue of the causal ordering of the relationship between academic self concept and college academic performance. It is certainly just as reasonable to hypothesize that students who receive good grades will come to believe that they are good students as it is to believe that students who believe they have the capacity to succeed are likely to perform well.

This issue was addressed in a study reported by Marsh (1990), who employed a longitudinal design in which both academic self-concept and academic achievement were measured at several points in time. In this study, Marsh reported that grade point averages of students in grades 11 and 12 were correlated positively with their academic self concept scores that had been obtained during the prior year, but that academic self-concept scores were not related significantly to grade point averages from the prior year. Thus, the temporal sequencing of these measures suggested that there is a significant causal path from academic self-concept to academic

achievement, but no such path from past achievement to academic self-concept. This finding may be particularly relevant with regard to underprepared college applicants given their lack of prior academic achievement.

Gerardi (1990) reported the results of a study suggesting that academic self concept may be a better predictor of the college academic achievement than cognitive measures. He studied minority and low income engineering students who were enrolled in remedial courses at one of the campuses of the City University of New York. He assessed academic self-concept using the Brookover Self Concept of Ability Scale. He reported that scores on this scale predicted academic success better than any of the available cognitive measures of academic skills or aptitude. He concluded that these "data seem to suggest that the empirical reality of minority and low-socioeconomic background students' academic potential becomes unrecognizable and unelucidated because these academic capabilities are hidden behind the traditional cognitive variables as the sole predictor of academic success" (p. 406).

Steele (1997) referred to "academic identification" as the formation of "a relationship between oneself and the domains of schooling such that one's self-regard significantly depends on achievement ...and sustained school achievement requires such an identification" (p.616). He argued that cultural factors can either promote or inhibit the development of such an identification. Ogbu (1986) suggests that there is a lower class black culture that is "oppositional" toward school achievement, therefore promoting identification with dropping out of school and resisting academic instruction.

Steele's notion of academic identification is related closely to efforts made in the SEEK program to promote student socialization into the subcultures of the institution (Francis, Kelly, & Bell, 1993). Francis and his colleagues presented a theory of retention and academic success that attempts to explain the circumstances and contexts in which some SEEK students are able to achieve academically, while others are not. They proposed that there are three categories of factors that may predict the academic performance and retention of SEEK students.

The first set of predictors were described by Francis and his colleagues as "Exogenous predictors." These were defined as including external and background characteristics, such as the student's high school grade point average, SAT scores, family income, educational background, and methods available for financing the student's education. The second set of predictors were described as "Endogenous predictors." These predictors were defined as including the utilization of remedial and tutorial services, skills development, counseling services, participation in peer clubs, and integration into college subcultures. Finally, the third set of predictors, referred to as "Institutional Interaction predictors," were defined as including academic adjustments and the absence of social stressors. In response to these factors, Francis and his colleagues proposed the utilization of additional outcome measures for students, including the crystallization of interests and the selection of a major field of study facilitated by "..contact and interaction. ... Our conceptual schema emphasize the interactional nature of the support processes involved in academic activities" (p.439). The interactional

emphasis appears responsive to Nicholi's (1967) observation (discussed above) of students becoming withdrawn.

Francis'et al,(1993) notions on socialization into the college subculture appears to be associated closely with Steele's (1997) concept of academic identification, which in turn is related to the student's self-esteem and academic self concept and is reflective of attitudes toward curricula and teaching activities. The empirical findings cited in this subsection, as well as the theoretical work of Steele (1997) and Francis et al. (1993) strongly suggest that models aimed at the prediction of academic performance and retention of minority and low income students would do well to include measures of socialization into the college subculture as well as measures of the student's academic self-concept.

Locus of Control is a personality factor that one might logically expect to be related to academic achievement. Individuals with an internal locus of control tend to feel that they have the capability of having an impact on their environments, and that they have some control

over the outcomes they will experience in life (Rotter, 1982). In contrast, individuals with a more external locus of control tend to believe that they have little control over the life outcomes they will experience. A number of studies have indicated that individuals with a relatively internal locus of control are more likely to enjoy academic success in college than are those with a more external locus of control (Chandler, Sibel, & Spies, 1990; Edwards, 1976; Gadzella, Williamson, & Ginther, 1985; Laffoon, Jenkins-Friedman & Tollefson, 1989). Notwithstanding these studies, however, at least one recent empirical study (Lavin, 1996) found no significant relationship between locus of control and college academic achievement.

The locus of control construct is derived from the concept of attribution. Individuals can attribute the outcomes that they experience as derived from their own effort, or they can assume that these outcomes are simply the result of chance or luck. Several investigators have considered the relationship between students' attributions and their academic achievement (Chandler, Sibel, & Spies, 1990; Laffoon, Jenkins-

Friedman & Tollefson, 1989).

Laffoon, Jenkins-Friedman, & Tollefson (1989) reported that high achieving students, both gifted students and nongifted students, tended to attribute their success to their effort, rather than to their natural abilities. In contrast, underachieving students tended to attribute their poor academic performance to lack of ability, rather than to lack of effort.

It would appear that these findings would have particular relevance to the underprepared student, such as the students in the SEEK program. Given that they have deficiencies in their academic skills, along with the lower high school average required for admission to SEEK, it would appear reasonable to assume that they would not expect to succeed in college on the basis of ability alone. Rather, one would expect that they will probably have to work harder than a better prepared student to achieve the same level of success. However, an underprepared student who attributes success to effort, rather than to natural ability, might continue to persevere long enough to develop the necessary academic skills for college completion.

Social support and relationships. Lavin (1965) considered the relationship between college students' academic achievement and several dimensions of interpersonal relationships, including student-to-student relationships, student-to-teacher relationships, and student-to-family relationships. Lavin's review of the existing research indicated that student-to-student relationships and student-to-teacher relationships were not related in any consistent manner to academic achievement. However, several dimensions of student-to-family relationships were found to be significantly related to college academic achievement. "The student who does well in school comes from a family which has a relatively small number of children, in which parents exhibit warmth and interest, where the child has a relatively high degree of power in decision-making, and where the family is able to arrive with relative ease at consensus regarding important values and decisions" (Lavin, p. 149). A study (Halle, Kurtz-Costes, Mahoney, 1997) of elementary school achievement in low-income children also found significance in parental

support and concluded that "the maintenance of positive attitudes about academic abilities and skills may be one of the most important family characteristics associated with future success" (p.535).

Thus it would appear that the support available to students from their families may be relevant to the students' academic achievement in college. This support may take a variety of forms, including physical and emotional support, acceptance of the individuality of family members, and moral support for the persistence of the student in his or her academic pursuits. In addition, a family value system that stresses the notion that the student has primary responsibility for his own academic success would appear to represent a positive influence in the direction of persistence.

Stressors. It would also appear logical to suspect that students' academic performance may be affected by a variety of stressful life events or situations as discussed above. These include such issues as pressing financial problems, disturbing social problems, or even such practical issues as the lack of a quiet place to study at home; particularly

problematic for students with work/class-attendance/ family responsibility schedules. Stress from these would appear to qualify as noncognitive factors that could adversely affect student performance and retention.

Delay of gratification and future orientation. Earning a college degree involves the expenditure of a considerable amount of effort and energy now which presumably will result in various benefits in the future. Although intrinsic motivation to learn is no doubt a factor that contributes to the academic perseverance of students, it has been shown that students are also motivated to persevere because they believe that higher education will have a positive impact on their professional and personal lives (Bell, 1992; Katchadourian & Boli, 1994). Lavin's (1966) research on students' belief in the future benefits of college suggested that most students believe higher education will ultimately benefit them both in terms of intellectual empowerment and through the skills it will provide to improve their chances for attractive career opportunities. Steward and Krieshok (1991) found the same results.

Thus, it would appear that an underprepared, economically disadvantaged minority group student has a great deal to overcome in order to persist in college to graduation. For these students, more than any other group of college students, there is reason to expect that persistence in college involves the ability to delay gratification. Certainly, those students who are able to delay gratification would appear to be more likely to persevere than those who are more dependent on immediate gratification.

According to Mischel (1974), "Basic to most philosophical concepts of 'will power' and the parallel psychological construct of 'ego strength' is the ability to postpone immediate gratification for the sake of future consequences, to impose delays of reward on oneself, and to tolerate such self-initiated frustration" (p.249). His suggestion that the ability to delay gratification and to tolerate self-initiated frustration for the sake of future gains is related positively to the achievement of success, and thus to the likelihood of success in college. In the study by Nixon and Frost (1990) described above, another significant predictor of academic performance

they identified was the presence of long term goals which the students believed they would achieve. Thus, it appears that both the ability to delay gratification and a future orientation are potentially valuable noncognitive predictors of students' academic performance and retention, particularly for students who will require a longer time to complete graduation requirements.

Delay of gratification and future orientation concepts are evoked when the history of educational experiences of African Americans, who were themselves once slaves in America, is examined. Initially, the ultimate objective of education for former slaves was limited to training for needed workers primarily in the fields of the land (Fishel & Quarles, 1970). Still, leaders at that time hoped loftier goals would be realized as Booker T. Washington suggested in his classic autobiography, Up from Slavery(1901): "I explained that my theory of education for the Negro would not, for example, confine him for all time to farm life - to the production of the best and the most sweet potatoes - but that, if he succeeded in this line of industry, he could lay the foundations upon which

his children and grandchildren could grow to higher and more important things in life" (p.203).

Optimism. It is logical to expect that an individual who has an optimistic outlook with respect to future outcomes will find it easier to delay gratification than an individual who does not look on the brighter side of things. Both optimism and hope have been shown to predict academic success in college students better than scores on the SAT (Snyder, 1994), and better than SAT scores or high-school grades (Seligman, 1992). Commenting on his study of 500 entering freshman at a large Eastern university, Seligman noted that "College entrance exams measure talent, while explanatory style tells you who gives up ... your actual achievement is a function not just of talent, but also of the capacity to stand defeat" (p.88).

Scheier, Weintraub and Carver (1987) suggested that dispositional optimism is a predictor of academic effort, persistence, and achievement. In addition, several studies have indicated that optimism is related significantly to a whole complex of variables reflecting subjective well-being, including positive

self concept and high self-esteem (Campbell, 1990; Marshall & Long, 1990; Scheier & Carver, 1987; Seligman, 1992).

There is also some reason to distinguish between academically prepared and academically underprepared students with respect to the dimension of optimism. Katchadourian and Boli (1994) argued that academically prepared students are more likely than underprepared students to have had certain social, economic, and educational advantages early in the course of their educational development, including a rich home environment, parental assistance, professional tutorial assistance if necessary, and additional extra-curricular educational enhancements. While academically prepared students by no means uniformly come from middle class and wealthy families, they are certainly more likely to come from such families than are underprepared students. For this reason, such students will also naturally tend to anticipate continued success, both in their college careers and in their subsequent vocational endeavors.

In contrast, students who arrive at college academically underprepared are likely to have come from

lower socio-economic status families, inferior schools, and distressed social environments (Bell, 1992; Omolade, 1986). As discussed earlier, economic disadvantage is actually a criterion for admission to the SEEK Program along with lower than traditionally required high school grade point average. How can a population such as SEEK students feel optimistic about education given their history of academic experiences with its lack of mastery? On the other hand, how can they continue to pursue educational achievement without such feelings?

Thus it appears clear that a variety of noncognitive factors are associated with college academic performance and perseverance, for students in general and for academically underprepared students in particular. This in turn suggests the utility of studies that may lead to the development of comprehensive models for the prediction of success in college from a broad range of cognitive and noncognitive factors. The work that has been carried out in this area is discussed below.

Multivariate models for predicting college success from

cognitive and noncognitive factors.

Sedlacek and Brooks (1976) proposed a model for the prediction of success among college students. This model included a series of noncognitive dimensions. The seven noncognitive dimensions proposed by Sedlacek and Brooks were: (1) positive self-concept; (2) realistic self-appraisal; (3) ability to deal with and understand racism; (4) preference for long-range goals over more immediate, short-term needs; (5) availability of a strong support person; (6) successful leadership experience; and (7) demonstrated community service.

Tracey and Sedlacek (1984) developed the Non-Cognitive Questionnaire (NCQ), a 23-item survey instrument designed to assess these dimensions. They validated this instrument on a large sample of black and white students enrolled in a predominantly white eastern state university. Factor analytic procedures indicated that the instrument had a similar eight-factor structure for white and black students. The eight NCQ subscales that emerged from this analysis were named: (1) Certainty of Academic

Plans; (2) Support for College Plans; (3) Community Involvement; (4) Long Term Academic Goals; (5) Perseverance; (6) Expected Academic Difficulty; (7) Academic Familiarity; and (8) Leadership.

Tracey and Sedlacek (1984, 1985, 1987) reported that the NCQ items that were significant predictors of college GPA among both black (419) and white (2323) student samples were those that reflected positive self-concept, realistic self-appraisal, and preference for long range goals. Academic familiarity was predictive for White, but not Black students and demonstrated community service before college was predictive for Black students only. They also reported that the NCQ predicted persistence in college, and that the predictive ability of the NCQ was greater for Black students than for White students. Persistence for White students was limited to positive self-concept, but for Black students, included realistic self-appraisal of academic skills, academic self-concept, demonstrated community service, having support for college plans and understanding racism. In addition, Rogers (1984) reported that NCQ items predicted grades at the end of the first semester among

a sample of black freshmen.

However, another study yielded contradictory findings (Arbona & Novy, 1990). Arbona and Novy administered the NCQ to samples of black (n = 95), Mexican (n = 96) and white (n = 555) students entering a large state university in the southwest. They also recorded the SAT scores of these students, and at the end of their first year in school they recorded cumulative GPAs. The authors reported that 25 percent of the black students, 19 percent of the Mexicans, and 19 percent of the white students had dropped out of college by the end of their first year. The students in the three ethnic groups had similar mean scores on the eight NCQ subscales, however, the factors that predicted first-year GPA significantly varied from one ethnic group to another: "...neither the SAT scores nor the NCQ factors were predictive of black students' cumulative GPAs. For Mexican-American students, the SAT math scores and the NCQ subscale for Certainty of Academic Plans were predictive of first-year grades. For whites, both SAT math and SAT verbal scores and Academic Familiarity were predictive of first-year grades" (p.419).

Persistence was not predicted by NCQ variables for African American or Mexican American students, whereas academic familiarity, long term academic goals, support for college plans and community involvement predicted persistence for White students.

Arbona and Novy (1990) explained the differences between their findings and those of prior studies in terms of differences among the institutions in which the research was done and corresponding differences among the student samples. They speculated that "The factors that affect college performance may vary widely across institutions and ethnic groups" (p.421).

In summary, these studies do indicate that noncognitive and cultural factors such as academic self-concept, and problems of daily living related to family of origin characteristics and socioeconomic status are clearly related to the level of difficulty that a given student may experience in completing college.

Summary

The literature is clear that the High School

Grade Point Average (HSGPA) and Scholastic Aptitude Test (SAT) scores are not precise predictors of college academic performance and retention. It has been found that these measures are especially unreliable in predicting the performance of students from minority groups and students who are economically disadvantaged. Thus, the reliance on SAT scores due to convenience, in particular for making college admissions decisions, is unsatisfactory, especially for students from disadvantaged and minority ethnic and cultural groups. It has been found that a combination of psychological and social factors together with the cognitive measures are better predictors of the academic performance and retention of college students, especially of those from less advantaged groups.

The literature suggests that noncognitive factors are significant determinants of college academic performance. These include aspects of economic and personality characteristics. Thus, such factors as achievement motivation, concerns about personal problems of living, conflicts in self concept and self esteem, financial stress, issues of family and social support, and dimensions of the student's educational

experience including prior curricula successes and failures, teacher reactions as well as academic and vocational plans and goals all help or hinder the college student and may well outweigh the student's scholastic expectations as measured by the standard predictors, HSGPA and SAT. This study investigated whether and which noncognitive factors predict persistence to graduation for academically underprepared upon admission, economically disadvantaged college students.

Hypotheses.

This study tested the following hypotheses:

Hyp1: Initially academically underprepared, economically disadvantaged college students who persist to graduation will have significantly higher achievement motivation than non-persisters.

Hyp2: Initially academically underprepared, economically disadvantaged college students who persist to graduation will have significantly fewer problems and concerns of daily living than non-persisters.

Hyp3: Initially academically underprepared, economically disadvantaged college students who persist to graduation will have significantly fewer negative attitudes toward curricula and teaching activities than non-persisters.

Definitions.

Academically underprepared - according to guidelines created by the New York State Department of Education, based on university criteria:

(1) Upon application, students whose high school grade point average is less than 80;

(2) After admission, students whose proficiency testing in reading, writing and mathematics results in required registration into remedial courses to establish academic competence.

Achievement motivation - as measured by the Edwards Personal Preference Schedule (see next chapter).

Attitudes toward curricula and teaching activities - as measured by the Survey of Study Habits and Attitudes (see next chapter).

Economically disadvantaged - based on criteria established by the New York State Commissioner of

Education, determined by a financial table that includes family income and number of family members.

Non-Persisters - (1) students who have not graduated and
(2) have not registered in more than three consecutive semesters.

Persisters - (1) students who have graduated from the university, or;
(2) students still in attendance and registered for the current term, or;
(3) students not currently registered, but away less than three consecutive semesters.

Problems and concerns of daily living - as measured by the Mooney Problem Checklist (see next chapter).

SEEK Program - (Search for Education, Elevation and Knowledge) support program established in The City University of New York for

graduates of New York City High Schools to assist in providing equality of educational opportunity to academically underprepared, financially disadvantaged students admitted to the university.

Chapter Three

Methodology

This study investigated psychosocial variables as predictors of persistence to graduation of academically underprepared upon admission, economically disadvantaged college students. This chapter describes the subjects, measures, procedures and methods of data analysis used to test the hypotheses.

Subjects

SEEK students who attended the required Orientation course during the Fall, 1991 and 1992 were given a series of paper and pencil social attitude questionnaires which were used for this study. Fifty-two students took all the tests which, consequently,

were used for this study.

The Orientation course is a zero (0) credit course that meets 2 hours per week and may be used to establish full time status. Students are required to register for a minimum of 12 hours per week of courses in their first semester, along with courses in reading, writing and math remediation.

The Orientation course is taught by members of the counseling faculty. Students are assigned to the caseload of their Orientation course teacher for academic and/or personal counseling throughout their student status. Course objectives include improving study skills, self-assessment of personal development, career planning, and the examination of requirements, programs and services of the college. The course also provides students with an opportunity to learn from each other as they discuss their goals and values along with concerns and anxieties that may develop as they adjust to the college.

Students are routinely administered a variety of assessment measures in the orientation course, including those made available (in accordance with guidelines for student permission and protection of

student confidentiality) for this study and discussed below. The use of assessment measures is optional, but faculty are directed to adhere strictly to the instructions provided in each instrument's manual for administration. All test administrations were conducted in the orientation courses.

Measures.

Edwards Personal Preference Schedule (EPPS) (Edwards, 1953, 1959). The EPPS was designed to assess individual personality by measuring the relative importance to the student of the following 15 psychological needs and motives: Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intraception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, and Aggression (see Appendix A for definitions as they appear in the manual).

The EPPS is based on the theoretical framework conceptualized by Henry A. Murray's Personology theory, (1938). His theory resulted from his

examination of the interaction between the person and the environment, which he thought was necessary for the study of personality. Murray believed that person-environment interactions are determined by forces within the person, referred to as needs, interacting with forces from the environment, referred to as press. Murray identified 12 primary (viscerogenic) and 27 secondary (psychological) needs. He suggested that the characteristic operation of each need on the environment was either manifest, resulting in overt action, or latent, expressed only in the subjective, unobservable world of fantasy. Presses were defined as either objective (from outside the body), or subjective (internal).

Edwards (1959) selected 15 of Murray's secondary needs (see Appendix A) to measure in the Edwards Personal Preference Schedule (EPPS). He wrote 210 pairs of self-referent statements to reflect these needs. Fifteen of these pairs were repeated in the EPPS as a check on consistency of response (Helms, 1983). The instrument consists of 225 items and is presented in a forced dyadic choice format. Subjects select from each pair the one statement that is most

characteristic of them. The statements in each pair reflect a different one of the 15 needs, so each selection forces the respondent to nominate one psychological need over another as illustrated by the following examples from the EPPS:

26. A I like to be successful in things undertaken.
B I like to form new friendships.

76. A I like to be loyal to my friends.
B I like to do my best in whatever I undertake.

102. A I like to analyze my own motives and feelings.
B I like to make as many friends as I can.

The selection of 26 A and 76 B would result in score points on the achievement scale; 26 B, 76 A, and 102 B on the affiliation scale; and 102 A on the intraception scale.

Each of the 15 needs is represented 28 times in the 210 pairs, so total scores for each need have a theoretical range of 0 to 28. If the respondent endorses one statement in a pair, s/he cannot endorse the other. This kind of scoring is called ipsative (Sherman, 1979). Since the scale scores are dependent on each other, one could say that a subject's need for

autonomy is greater than his/her need for achievement, but not that one subject's need for autonomy is greater than another subject's need for autonomy. However, one could assess that one subject has a great need for autonomy and the other subject does not.

Acceptable levels of reliability and validity have been reported for the EPPS (Furnham & Henderson, 1982; Kassera & Russo, 1987; Murgatroyd & Gavurin, 1975; Piedmont, McCrae & Coster, 1992). Evidence of the reliability of the EPPS scales has been offered in the form of internal consistency (split-half) reliability coefficients ranging from .60 to .87 across the 15 subscales, with one-week test-retest reliability coefficients ranging from .74 to .87 (Edwards, 1959). Similarly, Sherman (1979) noted that "in general, the split-half and test re-test reliability coefficients reported for the EPPS have been about .75 and .80, respectively" (p.171).

Evidence of the validity of the EPPS scales has been presented in the form of significant correlations between EPPS subscales and theoretically related measures, including the Taylor Manifest Anxiety Scale and the cooperativeness, agreeableness, and objectivity

subscales of the Guilford-Martin Personnel Inventory (Edwards, 1959). In addition, correlations between the Strong-Campbell Interest Inventory and the EPPS demonstrate support for psychologists' long held beliefs regarding interactions between personality preference and career interest factors (Kassera & Russo, 1987).

The EPPS has been used widely in research studies over the years since its inception in 1953 and its revision in 1959 (Edwards, 1959). In recent studies, it has been used to examine the needs and preferences of successful college students (Steward, 1993), college students from different cultures (Chiu, 1990), medical students (Thorson & Powell, 1988), and in the relationship of sense of humor to personality (Thorson & Powell, 1993). The EPPS is also used for personal counseling (Helms, 1983).

In this study the EPPS was used to measure the student's achievement motivation.

The Mooney Problem Checklist (MPC) (Mooney, 1950) was developed in the 1940's by Ross L. Mooney and

Leonard V. Gordon as a method to systematically discover students' problem areas. It is still used for this purpose in many college counseling centers. It was developed by analyzing statements of problems of over 4000 students and adults along with a survey of the literature, and the counseling experiences of the authors (Mehrens & Lehman, 1969). The MPC consists of a 330 item list of personal problems, 30 of which pertain to each of 11 problem areas: (1) health and physical development; (2) finances- living conditions and employment; (3) social and recreational activities; (4) social-psychological relations; (5) personal-psychological relations; (6) courtship-sex-marriage; (7) home and family; (8) morals and religion; (9) adjustment to college; (10) the future - vocational and educational; and (11) curriculum and teaching. Students underline or mark sense answer sheets (depending on method of scoring: hand or machine) if the problem listed is of concern (troubling, worrisome, difficult). Items selected are tallied by category then summed for a total score. Specific items include:

1. Feeling tired much of the time.

16. Being timid or shy.

131. Unhappy too much of the time

216. Classes too large.

321. Afraid of unemployment after graduation.

Evidence of the reliability and the validity of the MPC has been provided by Stewart and Deiker (1976), who factor analyzed the responses to the MPC of three samples of adolescents, including 273 public school students in grades 7 to 12, 173 patients in a voluntary residential treatment program for emotionally disturbed adolescents, and 134 inmates at a training school for delinquents. These investigators found that the factor structure of the MPC was quite similar among the three samples, indicating the reliability of the problem domains assessed by the MPC. They also reported significant differences in the problems reported by the adolescents in the three different samples, thus providing evidence of validity through the method of group differences.

The MPC has been used in research on the nature of the problems experienced by college students (Puskar & Lamb, 1991; Silverman & Juhasz, 1993).

In the proposed study the MPC was used to measure the problems of living experienced by the student in

accordance with hypothesis number 2.

Even though this measure was administered on admission, it is used for this study on the assumption that problem profiles are generally consistent during a period of student status (Chickering & Reisser, 1990).

The Survey of Study Habits and Attitudes (SSHA) (Brown & Holtzman, 1953, 1984). "The fact that some students with apparently high scholastic aptitude do very poorly in school while others with only mediocre ability do well ... presented a challenge to many educators ... The SSHA was developed to meet this challenge" (Brown & Holtzman, 1967, p.5). Based on interviews with students, and developed in 1953 by William H. Brown and Wayne H. Holtzman, the SSHA was designed to predict academic success in high school and college by identifying students whose study habits and attitudes differ from students who do well in their academic work (Mehrens & Lehman, 1969). It measures methods for studying along with attitudes toward curricula and teaching activities. Student responses to this 100-item rating scale which employs a five-

point Likert-type response format result in scores on four scales: (1) Delay Avoidance (DA); (2) Work Methods (WM); (3) Teacher Approval (TA); and (4) Educational Acceptance (EA). Scores on the DA and WM scales assess study habits. TA and EA scales assess attitudes regarding curricula and teaching activities. Students respond to statements such as:

(DA) 9. Day dreaming about dates, future plans, etc. distracts my attention from my lessons while I am studying.

(WM) 34. In taking notes, I tend to take down material which later turns out to be unimportant.

(TA) 47. I think that teachers tend to talk too much.

(EA) 40. Some of my courses are so uninteresting that I have to "force" myself to do the assignments.

Students may choose one of five answers:

1. R - Rarely (0% to 15%)
2. S - Sometimes (16% to 35%)
3. F - Frequently (36% to 65%)
4. G - Generally (66% to 85%)
5. A - Almost Always (86% to 100%)

Each response earns 0, 1, or 2 points in accordance with responses made by successful college students. For example, SSHA item 9 (above) earns 2

score points on the DA scale if the response is R (rarely), 1 score point if the response is S (sometimes) and 0 for any other response. The maximum raw score per scale is 50. "High scores on SSHA are characteristic of students who get good grades, while low scores tend to be characteristic of those who get low grades" (Brown & Holtzman, 1967, p.12).

Evidence of the reliability of the SSHA has been provided in the form of internal consistency reliability coefficients (alpha coefficients) ranging from .87 to .89 for the four subscales (Brown & Holtzman, 1967, p. 24). Four-week test-retest reliability coefficients ranging from .88 to .93 were reported.

Evidence of the validity of the SSHA has been provided in the form of significant correlations between total scores on the SSHA and grade point average among several samples of students in grades 7 through 12 (Brown & Holtzman, 1967).

The SSHA is widely used as a diagnostic instrument by high school and college counselors to assess the nature of the difficulties that a particular student may be experiencing. The SSHA is also used as

a teaching instrument in courses on study skills, as well as in research studies concerned with the prediction of academic success (Santa-Rita, 1996; Schwitzer, Grogan, Kaddoura, & Ochoa, 1993)

In this study, the SSHA was used to measure the students' attitudes in accordance with hypothesis number 3.

Procedure

The statistical analysis included EPPS, MPC, and SSHA score sheets, collated and matched with academic transcripts. Data for each student included:

1. 16 EPPS scale scores
2. 11 MPC scale scores and totals
3. 4 SSHA scale scores
4. Academic Transcript
   (current beginning of F'98 term)

Demographic Data. A transcript provided basic demographic data and was used to classify each student as a persister or a non-persister. Students were

classified as persisters if they (1) have been graduated from the university, or; (2) are still in attendance and registered for the current term, or; (3) not currently in attendance, but have been away less than three consecutive semesters. Non-persisters (1) have not graduated and (2) have not registered in more than three semesters. There were 17 persisters and 35 non-persisters in this study's sample of 52 students. Like the sample, classification of the remaining students in the orientation courses who did not complete the measures also resulted in approximately a 2 to 1 ratio of non-persisters to persisters.

Chapter Four

RESULTS

The study reported here was conducted to investigate psychosocial correlates of retention in college among academically underprepared upon admission, economically disadvantaged students. The hypotheses presented three major predictor domains: (1) Achievement motivation, a personality factor measured here by the Edwards Personal Preference Schedule; (2) Problems and concerns of daily living, as assessed through the Mooney Problem Checklist; and (3) Attitudes toward curricula and teaching activities, as measured by the Survey of Study Habits and Attitudes. This chapter reports the results and presents a description of the sample compiled from the background data.

Description of the Sample

This sample contained a total of 52 respondents of whom 17 (32.7%) were classified as persisters and 35 (67.3%) as non-persisters (see Table 1). Among the persisters, five (29.4%) had been graduated. The respondents ranged in age from 16 to 23 years with a mean of 18.5 years. The average age of the persisters was 18.4; 18.5 for non-persisters (see Table 1).

Table 1

Sample Size and Age

	N	%	Age (Mean)
Persisters	17	32.7	18.4
Non-Persisters	35	67.3	18.5

The data in Table 2 indicate that 19 of the respondents were males (19.3%) and 42 were females (80.7%). The respondents came from four of the five boroughs, with the largest proportion of the respondents residing in Brooklyn (37.3%) (see Table 3).

Eight of the students had English as their second language (15.3%) (see Table 4). Chi square tests were employed to test whether the persisters and non-persisters differed significantly by gender, borough of residence and English as a second language status. None of these differences were statistically significant.

Table 2

Gender Distribution

	Male	Female	%
	N	N	
Persisters	3		17.6
		14	82.4
Non-persisters	7		20.0
		28	80.0
Total	10		19.3
		42	80.7

Table 3

Borough of Residence

	N	%
Manhattan	7	13.7
Bronx	16	29.4
Brooklyn	19	37.3
Queens	10	19.6
Total	52	

Table 4

English / 2nd Language

YES	8	15.3
NO	43	82.7
Total	51 (+1, no answer)	

The number of semesters that the respondents attended college ranged from two to 12.25, with a mean of 6.9 (SD = 3.2). The number of semesters of part time attendance ranged from zero to four, with a mean

of 0.6 semesters (SD = 1.0). Eleven of the 52 students (21.2%) had experienced breaks in their college attendance. The largest number of breaks in attendance reported was two. The number of credits attempted by the members of the sample ranged from 7 to 157.5, with a mean of 79.4 (SD = 45.4). The number of credits completed ranged from 1 to 136.5, with a mean of 61.3 (SD = 42.5). Table 5 presents the differences between persisters and non-persisters on these variables.

Half of the 52 students had taken remedial courses in reading. The number of semesters of remediation in reading ranged from zero to five, with a mean of 1.1 semester (SD = 1.4 semesters). Twenty-three of the 52 respondents (44.2%) had taken remedial courses in writing. The number of semesters of remediation in writing ranged from zero to four, with a mean of 0.8 semesters (SD = 1.2) semesters). All but seven of the respondents (86.5%) had taken at least one semester of remedial courses in math. The number of semesters of remedial math ranged from zero to five, with a mean of 2.1 semesters (SD = 1.3 semesters). Table 5 presents the differences between persisters and non-persisters on these variables.

As Table 5 indicates, the two groups differed significantly on four of the eleven background variables: semesters attended (t = 8.69, p < .001), credits attempted (t = 3.43, p < .001), credits completed (t =6.81, p < .001), and grade point average (t = 3.43, p < .001). In each case, as would be expected, the persisters had the higher mean scores.

Table 5

Univariate tests of differences between Persisters and Non-Persisters on Background Variables

variable	persisters (N=17) mean	SD	non-persisters (N=35) mean	SD	t
semesters attended	10.4	1.2	5.2	2.3	8.69***
part-time semesters	0.9	1.0	0.4	0.9	1.81
breaks in attendance	0.4	0.6	0.2	0.6	0.74
semesters remediation					
reading	0.9	1.0	1.2	1.6	-0.74
writing	0.8	1.0	0.9	1.2	-0.27
math	1.8	1.5	2.2	1.2	-1.12
credits attempted	128.5	20.5	55.6	33.2	8.31***
credits completed (earned credits)	103.3	29.3	41.0	31.7	6.81***
grade point average (current)	2.6	0.4	1.9	0.7	3.43***

*** $p < .001$

Multivariate Test of Differences between Persisters and Non-Persisters

A one-way multivariate analysis of variance (MANOVA) was employed to obtain a multivariate test of the significance of the difference between persisters and non-persisters. The dependent variables included in this analysis were the 16 subscales of the Edwards Personal Preference Schedule, the 11 subscales of the Mooney Problem Checklist, the four subscales of the Survey of Study Habits and Attitudes, and the interval scale background variables, such as number of semesters attended, number of breaks in attendance, number of credits attempted, and number of credits completed.

The MANOVA narrowly missed significance ($F(45,6) = 3.43, p = .062$). This finding suggests that the results of the many univariate tests reported in this section must be treated with caution, as significant univariate results could be the result of Type 1 (false positive) errors. Nevertheless, the results of the univariate tests of the hypotheses are reported as suggestive evidence of possible differences between the persisters and the non-persisters.

Personality Differences between Persisters and Non-Persisters

The first hypothesis predicted that persisters would have significantly higher achievement motivation scores than non-persister, as measured by the Edwards Personal Preference Schedule. Table 6 presents the results of the univariate tests comparing the persisters and the non-persisters on the achievement scale of the Edwards Personal Preference Schedule (EPPS). There was no significance. Further, in view of the ipsative nature of the scores, as can be observed in the ranking of variables by persisters and non-persisters (see Table 7), there was little variation. For example, the achievement variable was ranked in third place (3) by persisters and fifth place (5) by non-persisters (Table 7). Thus the evidence derived from the present study does not support the view that persisters and non-persisters are differentiated by achievement motivation, nor any of the other personality variables measured by the EPPS.

Table 6

Univariate tests of differences between persisters and non-persisters on Edwards Personal Preference Schedule subscales

Variable	persisters (n=17) mean	SD	non-persisters (n=35) mean	SD	t
achievement	15.2	3.2	14.9	3.2	0.19
deference	9.9	4.2	10.9	4.2	-0.78
order	11.3	4.3	11.5	5.3	-0.11
exhibition	15.8	4.4	13.7	4.2	1.36
autonomy	11.9	3.2	12.9	4.1	-0.84
affiliation	14.2	3.8	12.3	4.6	1.45
intraception	15.8	4.4	15.2	4.6	0.44
succorance	13.5	3.2	14.2	4.9	0.58
dominance	13.5	4.3	12.5	4.1	0.75
abasement	14.7	3.8	14.4	5.2	0.19
nurturance	14.7	4.7	16.1	3.5	-1.25
change	13.7	6.0	16.0	6.2	-1.53
endurance	11.4	3.9	12.6	5.6	-0.81
heterosexuality	11.5	6.7	13.2	5.8	-0.96
aggression	13.2	6.2	15.0	3.6	-1.36
consistency score (15 = highest possible)	10.9	2.0	11.3	1.9	-0.60

no significant differences were found

Table 7

Edwards Personal Preference Schedule,

by Rank Order

	Persisters		Non-persisters
1.	Intraception	1.	Nurturance
2.	Exhibition	2.	Change
3.	Achievement	3.	Intraception
4.	Nurturance	4.	Aggression
5.	Abasement	5.	Achievement
6.	Affiliation	6.	Abasement
7.	Change	7.	Succorance
8.	Dominance	8.	Exhibition
9.	Succorance	9.	Heterosexuality
10.	Aggression	10.	Autonomy
11.	Autonomy	11.	Endurance
12.	Heterosexuality	12.	Dominance
13.	Endurance	13.	Affiliation
14.	Order	14.	Order
15.	Deference	15.	Deference

Problems of Daily Living Differentiating Persisters from Non-Persisters

The second research hypothesis predicted significantly fewer problems and concerns of daily living for persisters than for non-persisters, as measured by the Mooney Problem Checklist. Table 6 presents the results of the univariate tests comparing the two groups on these measures. None of the differences between the scores of the persisters and non-persisters on these scales were significant. Thus the data do not support the position that persisters and non-persisters are differentiated by the problems of daily living experienced according to the Mooney. In fact, Adjustment to College was ranked first and Personal Psychological Relations ranked second by both the persisters and the non-persisters.) Table 7 presents, in descending order by highest scores, the listing of MPC variables as ranked by both groups.

Table 8

Univariate tests of differences between persisters and non-persisters on Mooney Problem Checklist

variable	persisters (N=17) mean	SD	non-persisters (N=35) mean	SD	t
health & physical development	6.2	3.6	6.7	4.2	-0.43
finances,living conditions, employment	6.3	4.8	6.6	3.4	- 0.23
social & recreational	8.4	4.7	6.3	3.8	1.74
social psychological relations	7.4	5.0	6.7	4.1	0.49
personal psychological relations	9.2	6.6	8.4	5.4	0.46
courtship,sex,marriage	5.9	3.3	5.3	4.4	0.51
home & family	6.4	4.5	6.1	4.8	0.25
morals & religion	6.8	5.1	5.7	3.8	0.85
adjustment to college	10.9	6.0	9.7	5.0	0.75
future vocation & education	8.4	4.5	6.1	3.6	1.90
curriculum & teaching procedure	3.8	3.0	3.3	3.7	0.55

no significant differences were found

Table 9

Mooney Problem Checklist,
by Rank Order

Persisters	Non-Persisters
1. Adjustment to College	1. Adj. to College
2. Personal Psych Relations	2. Personal Psyc Rel
3. Future, Vocation, Ed,etc.	3. Health & Phys Dev
4. Social & Recreational	4. Social Psych Rela
5. Social Psych Relations	5. Finances,living,..
6. Morals & Religion	6. Social & Rec
7. Home & Family	7. Home & Family
8. Finances, etc.	8. Future, Voc & Edu
9. Health & Phys Dev	9. Morals & Religion
10. Courtship, Sex & Marriage	10. Courtship, etc.
11. Curriculum & Teaching	11. Curr, & Teaching

Attitude Factors Differentiating Persisters from Non-Persisters

The third hypothesis predicted that persisters and non-persisters would be differentiated by their attitudes toward teaching and curricula activities as measured by the Survey of Study Habits and Attitudes. Table 8 presents the results of the univariate tests comparing the two groups on the four scales measured by the Survey of Study Habits and Attitudes. One of these four scales was significant, that for Education Acceptance ($t = -2.08$, $p < .05$). Counter-intuitively and in opposition to expectation, the mean score among the non-persisters (23.5) was higher on this measure than that of the persisters (17.9).

Table 10

Univariate tests of differences between Persisters and Non-Persisters on Survey of Study Habits and Attitudes subscales

variable	persisters (N=17)		non-persisters (N=35)		
	mean	SD	mean	SD	t
delay avoidance	15.4	10.1	18.2	8.0	-1.10
work methods	17.8	12.4	21.2	10.1	-1.08
teacher approval	18.8	8.6	23.4	10.2	-1.60
education acceptance	17.9	8.7	23.5	9.4	-2.08*

*$p < .05$

Summary

None of the hypotheses were sustained. Persisters did not differ significantly from non-persisters on the achievement motivation scale of the Edwards Personal Preference Schedule nor on any of the remaining personality scales. There were no significant differences between the two groups in the problems of daily living experienced by the students as measured by the Mooney Problem Checklist. Only one scale, educational acceptance, resulted in significant difference (t = -2.08, p < .05) on the Survey of Study Habits and Attitudes. The two groups differed significantly on four of the eleven interval scale background variables: semesters attended (t = 8.69, p < .001), credits attempted (t = 8.31, p<.001), credits completed (t = 6.81, p <.001), and grade point average (t =3.43, p < .001). In each case, the persisters had the higher mean score.

Chapter Five

Discussion of Results

This study has investigated personality and attitude differences among economically disadvantaged students who were academically underprepared upon college admission; and those who persisted to graduation in contrast to those who did not persist to graduation. As previously discussed, students who are academically underprepared upon admission represent an important and growing group of nontraditional college candidates, having arrived with the implementation of open admissions policies in colleges across the United States. The results of this study are discussed as suggestive evidence of possible differences in

psychosocial functioning between persisters and non-persisters.

Background Variables. As previously noted, the two groups, persisters and non-persisters, differed significantly on four of the eleven background variables: semesters attended (t =8.69, $p < .001$), credits attempted (t = 8.31, $p < .001$), credits completed (t = 6.81, $p < .001$), and grade point average (t = 3.43, $p < .001$). In each case, the persisters had the higher mean score (see Table 5). These findings are, to some extent, foregone conclusions, since persisters would be expected to stay in school longer, take more courses, and have higher grade point averages. However, it is interesting to note that the mean (Table 5) grade point average for non-persisters was 1.9 (SD=0.7) on a scale where 2.0 ("C" average) is defined as good academic standing. This indicates that some of the non-persisters departed in good academic standing. In fact, transcript assessments revealed that, at the time of departure, 21 of the 35 (60%) non-persisters had GPAs above 2.0, ranging from 2.05 to 2.95. This observation has been noted in other studies (Bennett & Okinaka, 1990; Berger & Johnson, 1966;

Francis, Kelly & Bell, 1993). In addition, the number of credits completed by this group ranged from 1 to 124 (128 required for the degree), (mean = 41.0, SD=31.7) indicating that many had completed remediation requirements and were matriculating in college level courses, almost finishing. These figures can be seen as suppportive of Tinto's (1996) finding that approximately seventy per cent of students who leave college, before graduating, depart for reasons other than academic performance.

Another noteworthy observation is the lack of a significant difference between persisters and non-persisters in this study on the number of semesters in remedial courses. All of the students needed remediation, non-persisters needed a little more (see Table 5). This finding may be seen as reflective of Steele's (1997) conclusion regarding the phenomenon of overprediction. What seems clear is his suggestion that something else "depresses the performance of these students once they arrive on campus" (p.615).

A final observation in this group of non-persisters, noted that only three had declared a major. In this regard, Campbell's (1990) finding in dropouts

of "an intrapsychic uncertainty and self-definitions that are more confused or uncertain" (p.544) would seem to apply to the non-persisters in this study. These students, like most, would probably benefit from interventions such as career and personal counseling designed to explore relevant dynamics and aimed at developing confidence. The self knowledge gained from these interventions would likely help them to crystallize their interests and to select a major field of study (Francis, Kelly & Bell,1993).

Personality/ Hypothesis 1. Although there were no statistically significant differences between persisters and non-persisters on any of the Edwards Personal Preference Schedule (EPPS) scales (Table 6), particularly as hypothesized with regard to the achievement variable, an examination of the rank order of variables (Table 7) presents suggestions of potentially important differences between the two groups. These observations are made in view of the "ipsative" scoring of the EPPS variables as framed by Murray's Personology theory which posits determinative influence of person-environment interactions in personality variations. The variable ranked in first

place by Persisters was intraception (to analyze one's motives and feelings, to observe others, to understand...etc, see Appendix A for more detailed definition). Non-persisters ranked nurturance #1 (to help friends when they are in trouble, to assist others less fortunate,...etc., see Appendix A).

High need for intraception suggests independence as a personal characteristic and appears to reflect intrinsic motivation to learn (Seth, 1995; Talbot, 1990), internal locus of control (Rotter, 1982), and ego strength necessary to tolerate frustration and to delay gratification for the sake of future gains (Mischel, 1974). High need for intraception would also appear to reflect Campbell"s (1990) description of high inner self esteem "..a global personal judgment of worthiness that appears to form relatively early in the course of development, remains fairly constant over time, and is resistant to change" (p.539).

High need for nurturance suggests dependence as a personal characteristic and appears to reflect an "explanatory style" (Seligman, 1992, p.88) that is consistent with a pattern of giving up with insufficient encouragement.

Commonly held attitudes and beliefs that fuel debates have been considered by scholars to determine aspects of the educational system (Inkles, 1968; Steele, 1990) particularly the college environment (Adams, et al., 1970; Bell, 1992; Crouse & Trusheim, 1988) that negatively impact students' academic self concept (Steele, 1997) and impede socialization into the college subculture (Francis, Kelly & Bell, 1993), ultimately limiting academic achievement in primary and secondary school (Ogbu, 1978, 1986; Spencer, 1987) and persistence in college (Tracey & Sedlacek, 1984, 1985, 1987). Like previous groups deemed nontraditional because of their ethnicity or socio-economic standing, students with lacks in reading, writing and mathematical skills have been the subject of intense controversy and debate regarding the appropriateness of their presence in the baccalaureate programs (Arenson, 1998; Knowlton, 1995; Lavin, Alba & Silberstein, 1981; Lavin & Hyllegard, 1996; Steele, 1997), potentially resulting in an unwelcoming environment for the new student, not a nurturing one. In this regard, it would seem that high need for Nurturance could interfere with persistence in college. In this study, although

Nurturance was ranked first by non-persisters, it was rated fourth by persisters. Similarly, Intraception, ranked first by persisters, was ranked third by non-persisters. These variables seem quite important, "relatively," for both groups.

The largest difference in rankings between the persisters and the non-persisters was on the variable Affiliation; 6th by persisters, 13th by non-persisters. The lower ranking of this variable by non-persisters is curious, particularly in view of their first place rank for Nurturance. Although by definition (see Appendix A) these variables are not synonymous, both derive from the same group of Murray's (1938) psychogenic needs as they "have to do with affection between people; seeking it, exchanging it, giving it, or withholding it" (p.83). Since these variables have shown significance in studies of academic achievement using the EPPS (Helms, 1983), non-persisters could be expressing the presence of powerful inner conflicts in this domain. In view of Murphy's (1938) statement that "a fondness for unfortunates suggests Nurturance" (p.107), SEEK student's view themselves as fortunate (admitted to college) and/or

unfortunate (in need of remediation) could impact the resolution of conflicts, interfering with the ability to persist.

Problems of Daily Living/ Hypothesis 2. Although Hypothesis 2 was not sustained and there were no statistically significant differences between persisters and non-persisters in the problems of daily living as measured by the Mooney Problem Checklist (Table 8), the rank order of mean scale scores indicates possible differences that could result in important variations in psychosocial functioning. As measured by the Mooney Problem Checklist, both groups ranked adjustment to college as their primary concern (Table 9) followed by personal - psychological relations. The future, vocational and educational, was next (third) for persisters, whereas, for non-persisters, health and physical development was ranked third. This indicates that both groups assess themselves quite similarly upon admission but they do have potentially important differences. Each group's third place ranked variable may suggest a preferred mode of problem solving. For persisters, the adjustment to college work may be facilitated by

insights gained while examining concerns regarding the future: vocational and educational (Chickering & Reisser, 1993). In the case of non-persisters, elevated concerns about health and physical development might be suggestive of ineffective functioning that could hinder the adjustment to college. Illness can interrupt maturation and prolong the crises involved in identity development (Erikson, 1968, 1982; Wittenberg, 1968).

MPC categories Adjustment to College and Curriculum & Teaching were ranked the same by both persisters and non-persisters; in first and last place respectively. This could suggest that for both groups, adjusting to college is more a "personal" than an "academic" concern.

Attitudes/Hypothesis 3. Non-persisters scored higher than persisters on all sub-scales of the Survey of Study Habits and Attitudes (SSHA); significantly higher on Education Acceptance (EA) (Table 10). This result is curious in view of the Mooney Problem Checklist's result of no difference in similar categories, Adjustment to College and Curriculum & Teaching Procedure. One reason for the variation in

scores could reflect the difference in response options; the MPC permits one to simply acknowledge the presence of a variable, the SSHA requires evaluation of the variable.

Another distinct possibility for this scoring pattern is that students did not respond entirely honestly, even though they are encouraged to respond truthfully. The higher scores of non-persisters could reveal a higher, more idealized view of student's attitudes and thoughts regarding plans or fantasies of academic life rather than what is actually manifested in student behaviors.

Limitations of the Study

This study is limited by the size of the sample. Complete battery findings were available for only fifty-two students.

It should also be noted that the well known limitations of paper and pencil test instruments in terms of eliciting more complex attitudes likely limit this study as well. This would affect all of the responses.

The students, both persisters and non-persisters were not available for interview or other follow up contacts. This could have enriched information derived from the paper & pencil tests.

Suggestions for Future Research

The literature has shown that psychological, social and attitudinal factors have an impact on academic achievement. Differences in these domains continue to merit controlled study. This study, though small, would seem to be supportive. Use of larger samples of students who are not in special programs would be useful. In addition, the addition of qualitative factors to the data of social and personality tests is also indicated.

Summary and Conclusions

Academically underprepared, economically disadvantaged students admitted to college in a special program for such students were followed to determine

the psycho-social variables that coincided with their ability to remain in college through to graduation in contrast to those who dropped out prior to graduation, "Persisters" and "Non-Persisters." The two groups were initially similar in measures of personality variables, in particular, need for achievement, as determined by the Edwards Personal Preference Schedule (EPPS), along with measures of problems in daily living as assessed with the Mooney Problem Checklist (MPC). Attitudes toward academic endeavors in those who eventually dropped out however, resulted in significance. The non-persisters scored significantly higher on one sub-scale of the Survey of Study Habits and Attitudes (SSHA), educational acceptance (EA), a score that essentially measures the respondents' rating of student/study behavior as well as the value of a college degree. It would seem that the intensity of the initial motivation was a counter indication of their eventual ability to remain in college through to graduation.

Based on the findings of this study and in consideration of its limitations, the following conclusions are considered tenable:

1. Variables from psychological and attitudinal domains warrant further and more extensive examination in college student populations to identify and understand these variables and the power of their impact on college student persistence.

2. This body of knowledge, personality and social attitude and experiences of students can be analyzed to provide insights for the determination of who among underprepared students can be expected to succeed in college with sufficient support such as forthcoming from programs like SEEK.

3. This body of knowledge can be used to provide insights for the development of protocols to use in the early identification of students' potential problem areas and to develop appropriate and effective strategies for intervention.

The manifest needs associated with each of the 15 *EPPS* variables are:

1. ach Achievement: To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

2. def Deference: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

3. ord Order: To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.

4. exh Exhibition: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

5. aut Autonomy: To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

6. aff Affiliation: To be loyal to friends, to participate in friendly groups, to do things for friends, to

pressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

9. dom Dominance: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

10. aba Abasement: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. nur Nurturance: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. chg Change: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

13. end Endurance: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job

ganized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.

4. exh Exhibition: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

5. aut Autonomy: To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

6. aff Affiliation: To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.

7. int Intraception: To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to analyze the motives of others, to predict how others will act.

8. suc Succorance: To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when dement for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. nur Nurturance: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. chg Change: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

13. end Endurance: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

14. het Heterosexuality: To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

15. agg Aggression: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

REFERENCES

Adams, C.L., Baxter, B., Barret, R., Clark, J., Garcia, M., Matthews, M., Mims, G., Trachtman, J., & Wimberly, W. (1970). A philosophy of counseling. Unpublished Manuscript, Department of Academic Skills, SEEK, Hunter College, CUNY.

Adler, L.L. (Ed.) (1989). Cross-cultural research in human development: life span perspectives. N.Y.:Praeger.

Agostin, T.M. & Sherry, K.B. (1997). Predicting early school success with developmental and social skills screeners. Psychology in the Schools, 34, 3, 219-228.

Allik, J. & Realo, A. (1997). Intelligence, academic abilities, & personality. Personality and Individual Differences, 23,5, 809-814.

Allport,G. (1954).The nature of prejudice. New York: Doubleday.

American Council on Education. (1995-1996).Minorities in higher education. Washington,D.C.: Office of Minority Concerns.

Annual Report, Office of Special Programs, City University of New York, 1970-71, 1984-85, 1990-91.

Applebome, P. (1997, May 4). Imperfect measures? tests, too, have their failings. The New York Times, p.E4.

Arbona, C., & Novy, D.M. (1990). Noncognitive dimensions as predictors of college success among Black, Mexican-American, and White students. Journal of College Student Development,31,415-422.

Archibold, R. (1998, March 10). For a popular school

parents spend a night in line in the rain. The New York Times, p. E 4.

Arenson, K.W. (1998, May 31). Classes are full at catch-up u. The New York Times, p. wk 4.

Arroyo,C.G. & Zigler, E. (1995). Racial identity, academic achievement and the psychological well-being of economically disadvantaged adolescents. Journal of Personality and Social Psychology,69,5, 903-914.

Astin, A.W. (1993). What matters in college? Four critical years revisited. San Francisco: Josey Bass.

Astin, A.W.(1993). Assessment for Excellence. Arizona: American Council on Education & The Oryx Press.

Atherley, C.A. (1990). The effects of academic achievement and socioeconomic status upon the self-concept in the middle years of school: a case study. Educational Research, 32, 3, 224-229.

Balkin, J. (1987). Psychological Correlates of success in college. Educational and Psychological Measurements, 47, 795-798.

Barrilleaux, S. (1972). Freshman study habits and attitudes. Rockville, MD: Montgomery College. (Eric Document Reproduction Service No. ED 063916).

Baumel,J. (1997, June 21). A stress test for third graders. The New York Times, p.21.

Bell, D. (1992). Faces at the bottom of the well. New York: Basic Books.

Bennett, C., & Okinaka, A.M. (1990). Factors related to persistence among Asian, Black, Hispanic, and White undergraduates at a predominantly White university: Comparison between first and fourth year cohorts.The Urban Review, 22,1, 33-60.

Berger, L. (1968). University programs for urban Black and Puerto Rican Youth. Educational Record, 49, 4, 382-388.

Berger, L. (1971). Three basic issues underlying educational opportunity programs. Education 92, 1, 45-51.

Berger, L. & Johnson, K. (1996). A counseling program for socially and economically disadvantaged evening college students who leave school in good academic standing. ED014090.

Berger, L. & Leaf, J. (1977). The promise of open-admissions. Educational Record, 57, 3, 155-161.

Bernstein, B. (1975). Class, codes and control.Vol.3. towards a theory of educational transmissions. London & Boston: Routledge & Kegen Paul.

Bloom,B., Davis, A., & Hess,R. (1965). Compensatory education for cultural deprivation. New York:Holt.

Breland, P.S., Escott, M., Martin, P.H., Rubenfeld, P. (1987). The effective counselor and the disadvantaged student: a view from both sides. The Journal of Negro Education, 56, (2), 212-220.

Brookover, W.R., Thomas, S., & Paterson, A. (1963). Self concept of ability and school achievement. Sociology of Education, 63, 271-279.

Bronner, E. (1997, November 8). Colleges look for answers to racial gaps in testing. The New York Times, p.A1,A12.

Brown, N.W.(1997).Description of personality similarities and differences of a sample of Black and White female engineering students. Psychological Reports,81, 603-610.

Brown, W.F., & Holtzman, W.H. (1953,1967,1984). Manual of the Survey of Study Habits and Attitudes. New York:Psychological Corporation.

Calvin Coolidge (1933) in Respectfully Quoted, A Dictionary of Quotations. Washington, D.C., Library of Congress.

Campbell, J.D. (1990). Self-esteem and clarity of the

self-concept. Journal of Personality and Social Psychology, 59, 3, 538-549.

Carter, S. (1991). Reflections of an affirmative action baby. New York: Basic Books.

Carty-Bennia, D. (1989, March 5). A debate on the SAT focuses on its fairness. Boston Globe, p.10.

Chandler, T.A., Sibel, C.A., & Spies, C.J. (1990). Attributions and affects related to actual vs perceived success in an actual achievement context. Psychological Reports, 66, 971-976.

Chickering, A.W. & Reisser, L. (1993). Education and identity. San Francisco: Josey Bass Publishers.

Chiu, L. (1990). Comparison of responses to Edwards Personnel Preference Schedule by Chinese and American college students. Psychological Reports, 67, 1296-1298.

Clark, A.J. (1995). Projective techniques in the counseling process. Journal of Counseling & Development, 73, 311-316.

Clark, K.B.(1967). Dark ghettos: Dilemmas of social power. New York: Harper.

Clark, M.J. & Halpern, D.F. (1993). The million dollar question: can an intrinsic learning experience help lowest quartile students succeed in college? Journal of Instructional Psychology, 20 (1), 29-39.

Cleary, T.A., Humphreys, L.G., Kendrick, S.A., & Wesman,A. (1975). Educational uses of tests with disadvantaged students. American Psychologist,30, 15-41.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Hillsdale, N.J.: Lawrence Erlbaum.

Conoley, J.C., & Impara, J.C. (Eds.) (1995). The Twelfth Mental Measurements Yearbook. Nebraska:

University of Nebraska Press.

Crouse,J., & Trusheim, D. (1988). The case against the SAT. Chicago: University of Chicago Press.

Demo, D.H., & Parker, K.D. (1987). Academic Achievement and self esteem among Black and White college students. Journal of Social Psychology,127,4, 345-355.

Donaruma, J. & Balkin, J. (1979). Personality correlates of reading ability. The Reading Instruction Journal, 22,57-59.

Dweck, C.S. (1986). Motivational processes affecting learning. American Psychologist,41,10, 1040-1048.

Edwards, A.L. (1959). Manual of the Edwards Personal Preference Schedule. New York: Psychological Corporation.

Edwards, A.L. (1984). An introduction to linear regression andcorrelation. New York: W.H. Freeman.

Edwards, O.L. (1976). Components of academic success: a profile of achieving Black adolescents. The Journal of Negro Education, 45, 408-422.

Emmeluth, D. (1979). An assessment of selected variables affecting success in community college introductory biology. Johnstown, NY: Fulton-Montgomery Community College. (ERIC Document Reproduction Service No. ED 174298).

Erikson, E. (1968). Identity: youth & Crisis. New York: W.W. Norton & Company.

Erikson, E. (1982). The Life Cycle Completed, a review. New York: W.W. Norton & Company.

Fishel, L. & Quarles, B. (1970). The Black American, a documented history. N.Y.: William Morrow & Co.

Fordham, S., & Ogbu, J.U. (1986). Black students' school success: coping with the "burden of 'acting white'". The Urban Review, 18, 3, 176-206.

Francis, K.C., & Kelly, R.J. (1988). Female SEEK students: a study of status and academic performance. Journal of Multicultural Counseling and Development, 16, 167-175.

Francis, K.C., Kelly, R.J. & Bell, M.J.(1993). Success in school: a research agenda on student attrition and retention in the SEEK program. Educational Evaluation and Policy Analysis, 15,4, 437-441.

Frost, S.H. (1991). Academic advising for student success:ˆA system of shared responsibility. Washington,D.C.:The George Washington University.

Furnham, A. & Henderson, M. (1982). A content analysis of four personality inventories. Journal of Clinical Psychology, 38,(4), 818-825.

Gadzella, B.M., & Williamson, J.D. (1984). Study skills, self-concept and academic achievement. Psychological Reports, 54,923-929.

Gadzella, B.M., Williamson, J.D., & Ginther, D.W. (1985).Correlations of self-concept with locus of control and academic performance. Perceptual and Motor Skills, 61, 639-645.

Garber, J. & Seligman, M.E.P. (1980). Human helplessness: theory and applications. New York: Academic Press.

Garcia, E.E. (1997). Where's the merit in the SAT? The New York Times. December 26, p. A 39.

Garni, K.F. (1980). Counseling centers and student retention: why the failures? where the successes? Journal of College Student Personnel, 21, 223-228.

Gerardi, S.J. (1990). Academic self-concept as a predictor of academic success among minority and low socioeconomic status students. Journal of College Student Development, 31, 402-407.

Goffman,E. (1963). Stigma: Notes on the management of spoiled identity. New York: Touchstone.

Goldman, R.D., & Hewitt, B.N. (1976). Predicting the success of Black, Chicano, Oriental and White college students. Journal of Educational Measurement, 13, 107-112.

Goldman, R.D., & Widowski, P. (1976). An analysis of types of errors in the selection of minority college students. Journal of Educational Measurement, 13, 3, 185 - 200.

Gottfredson, D.C. (1982). Personality and persistence in education: a longitudinal study. Journal of Personality and Social Psychology, 43,3, 532-545.

Gough, H. & Heilbrun,A.(1983). The Adjective Check List Manual. Palo Alto, CA: Consulting Psychologist Press.

Graham, S. (1992). Most of the subjects were White and middle class: trends in published research on African Americans in selected APA journals. American Psychologist, 47, 629-639.

Guthrie, J.W., Kleindorfer, G.B., Levin,H.M.,& Stout,R.T.(1971). Schools and inequality. Cambridge, MA.: MIT Press.

Halle, T.G., Kurtz-Costes,B., Mahoney,J.L.(1997). Family influences on school achievement in low income African American children. Journal of Educational Psychology,89,3, 527-537.

Harrington, M. (1967). The economic protest. In A.M.Ross & H.Hill (Eds.),Employment, race, and poverty: A critical study of the disadvantaged status of Negro workers from 1865 to 1965. New York: Harcourt (pp.234-257).

Haynes, N.M. & Comer, J. (1990). A comparison of learning and motivation among high school students. Psychology in the Schools, 27, 2, 163-171.

Hazard, F. & Danner, C. (1974). Predicting student achievement in two-year engineering technology programs. Paper presented at the Annual Meeting of

North-Central States for Community-Junior College Research. Iowa City, IA.

Helms, J.E. (1983). A practioner's guide to the Edwards Personal Preference Schedule. Illinois: Charles C. Thomas, Publisher.

Holden, C. (1989). Court ruling rekindles controversy over SATs.Science, 243, 885-887.

Inkeles, A. (1968). Social structure and the socialization of competence. Harvard Educational Review, Reprint Series, No.1, 50-68.

Jemmott, J.B. & Locke, S.E. (1984). Psychosocial factors, immunologic mediation and human susceptibility to infectious disease: how much do we know? Psychological Bulletin, 95, 78-108.

Jensen, A.R.(1961). Learning abilities in Mexican-American and Anglo-American children. California Journal of Educational Research,12,147-159.

Jensen, A.R.(1973). Educability and group differences. New York: Harper.

Jensen, A.R.(1980). Bias in mental testing. New York: Free Press.

Johnson, D. (1970). The Social Psychology of Education. New York: Holt Rinehart, & Winston, Inc.

Johnson, G. (1998). Tests show nobody's smart about intelligence. The New York Times. March 1, pp. 1, 16.

Johnson, K. (1998). Self-image is suffering from lack of esteem. The New York Times. May 5 p. F7.

Jones, K. & Day,J.D. (1997). Discrimination of two aspects of cognitive-social intelligence from academic intelligence. Journal of Educational Psychology, 89, 3, 486-497.

Kaiser, R.T., & Ozer, D.J. (1997). Emotional stability and goal related stress. Personality and

Individual Differences, 22,3, 371-379.

Kassera, W. & Russo, T. (1987). Factor analysis of personality preferences and vocational interests. Psychological Reports,60, 63-66.

Katchadourian, H. & Boli, J. (1994). Cream of the Crop. New York: Basic Books.

Koestner, R. & Zuckerman, M. (1994). Causality orientations, failure, and achievement. Journal of Personality, 62, (3) 321-346.

Knowlton, S. (1995, June 7). Questions about remedial education in a time of budget cuts. The New York Times, p.32.

Kulik, C.L.C., Kulik, J.A. & Shwalb, B.J. (1983). College programs for high-risk and disadvantaged students:A meta-analysis of findings. Review of Educational Research, 53, (3), 397-414.

Laffoon, K.S., Jenkins-Friedman, R., & Tollefson, N. (1989). Causal attributions of underachieving gifted, achieving gifted, and nongifted students. Journal for the Education of the Gifted, 13, 1, 4-21.

Lavin, D. (1965). The prediction of academic performance. New York Russell Sage Foundation.

Lavin, D. (1983). Socioeconomic origins and educational background of an entering class at CUNY: a comparison of regular and special program enrollees. The City University of New York: Office of Institutional Research and Analysis.

Lavin, D., Alba, R.D., & Silberstein, R.A. (1981). Right versus privilege. New York: The Free Press.

Lavin, D. & Crook, D.B. (1990). Open admissions and its outcomes: Ethnic differences in long term educational attainment. American Journal of Education, 98, 4, 389-425.

Lavin, D. & Hyllegard, D. (1996). Changing the odds:

open admissions and the life chances of the disadvantaged. New Haven: Yale University Press.

Lew, A.S., Allen,R., Papouchis, N., & Ritzler, B. (1998). Achievement orientation and fear of success in Asian Americn College Students. Journal of Clinical Psychology,54,1, 97-108.

Lichtman, C.M., Bass, A.R., & Ager, J.W. (1989). Differences between Black and White students in attrition patterns from an urban commuter university. Journal of College Student Development, 30, 4-10.

Linn, R.L. (1973). Fair test use in selection. Review of Educational Research,43, 139-161.

Lonner, W.J. & Berrry, J.W. (Ed.) (1986). Field methods in cross cultural research. Beverly Hills: SAGE Publications.

Maio, G.R., & Esses, V.M. (1998). The social consequences of affirmative action: Deleterious effects on perceptions of groups. Personality and Social Psychology Bulletin,24,1, 65-74.

Major, B., Spencer,S., Schmader, T., Wolfe, C., Crocker,J.(1998). Coping with negative stereotype about intellectual performance:The role of psychological disengagement, Personality and Social Psychology Bulletin, 24,1, 34-50.

Mantzicopoulos, P. (1997). How do children cope with school failure? A study of social/emotional factors related to children's coping strategies. Psychology in the School,34,3, 229-237.

Marsh, H.W. (1990). Causal ordering of academic self concept and academic achievement: a multiwave, longitudinal panel analysis. Journal of Educational Psychology, 82, 4, 646-656.

Marshall, G.N. & Lang, E.L. (1990). Optimism, self-mastery, and symptoms of depression in women professionals. Journal of Personality and Social

Psychology, 59, 1, 132-139.

Mehrens, W.A., & Lehman, I.J. (1969). Standardized Tests in education. New York: Holt, Rinehart & Winston, Inc.

Menand, L. (1997, April 20). Everybody else's college education. The New York Times Magazine, p.48-49.

Middleton, M.J.& Midgley, C. (1997). Avoiding the demonstration of lack of ability: An unexplored aspect of goal theory. Journal of Educational Psychology, 89,4, 710-718.

Miller, L.S. (1995). An American imperative: Accelerating minority educational advancement. New Haven, Ct.: Yale University Press.

Miller, L.S. (1996, March). Promoting high academic achievement among non-Asian minorities. Paper presented at the Princeton University Conference on Higher Education, Princeton, N.J.

Mischel, W. (1974). Processess in delay of gratification. in Berkowitz, L. (Ed.) Advances in Experimental SocialPsychology, 7, New York: Ballentine Books.

Mooney, R.L. & Gordon, L.V.(1950). Manual of the Mooney Problem Check Lists. New York: The Psychological Corporation.

Murgatroyd, D. & Gavurin, E.I. (1975). Comparison of Edwards Personal Preference Schedule norms with recent college samples. The Journal of Psychology, 91, 71-76.

Murray, H.A. (1938). Explorations in Personality. New York: Oxford University Press.

Murtha, J., Protach, W., & Kaufman, B. (1983). Persistence and achievement: a profile of graduates from the City University of New York. Office of Institutional Research and Analysis, The City University of New York.

Nettles, T.M. (1988). Toward undergraduate student equality in American higher education. New York: Greenwood.

New York Times, 3-10-98/p.B4 - see Archibold, R.(1998).

Nicholi, A.M., (1967). Harvard dropouts: some psychiatric findings. American Journal of Psychiatry, 124, 5, 105-112.

Nixon, C.T. & Frost, A.G. (1990). The study habits and attitudes inventory and its implications for students' success. Psychological Reports, 66, 1075-1085.

Ogbu, J.U. (1978). Minority Education and Caste. New York: Academic Press.

Ogbu, J.U. (1986). The consequences of the American caste system. In The school achievement of minority children. Neisser,U.(Ed.), Hillside, N.J.: Erlbaum.

Oldani, R. (1997). Causes of increases in achievement motivation: Is the personality influenced by prenatal environment. Personality and Individual Differences, 22,3,403-410.

O'Leary, A. (1985). Self-efficacy and health. Behavior Research and Therapy, 23, 437-451.

Omolade, B. (1986). It's a family affair: the real lives of single Black mothers. The Village Voice, 31, 24-28.

Osborne, J.W. (1997). Race and academic disidentification. Journal of Educational Psychology,89,4, 728-735.

Pascarella, E.T. & Chapman, D.W. (1983). A multi-institutional path analytic validation of Tinto's model of college withdrawal. American Educational Research, 20, 87-102.

Patton, M.J. & Robbins, S.B. (1982). Kohut's self psychology as a model for college student

counseling. Professional Psychology, 13, (6) 876-888.

Pearlman, I.R. (1988). Generating a structural description of persisting in a new and different situation. Master's Thesis, Hunter College, CUNY, School of Health Sciences.

Pelavin, S.H. & Kane, M. (1990). Changing the odds: factors increasing access to college. New York: College Board Publications.

Peterson, C., Vaillant, G.E., & Seligman, M.E.P. (1988). Pessimistic explanatory style as a risk factor for physical illness: a thirty-five year longitudinal study. Journal of Personality and Social Psychology, 55,1, 23-27.

Pfeifer, C.M. & Sedlacek, W. (1971). The validity of academic predictors for Black and White students at a predominantly White university. Journal of Educational Measurement, 8,4, 253-261.

Piedmont, R.L., McCrae, R.R. & Costa, P.T. (1992). An assessment of the Edwards Personal Preference Schedule from the perspective of the five-factor model. Journal of Personality Assessment, 58, 1, 67-68.

Piesco, J. & Podell, L. (1978). Graduation of disadvantaged students the senior colleges of CUNY. Evaluation Quarterly,2, (4) 600-607.

Poole, M.E. & Low, B.C. (1983). Who stays? Who leaves? an examination of sex differences in staying and leaving. Journal of Youth and Adolescence, 11, 1, 49-63.

Portes, A.J. & Wilson, K.L. (1976). Black-White differences in educational attainment. American Sociological Review, 41, 414-431.

Powerledge, F. (1967). To change a child: A report on the Institute for Developmental Studies. Chicago: Quadrangle.

Puskar, K. & Lamb, J. (1991). Life events, problems,

stresses, and coping methods of adolescents. Issues in Mental Health Nursing,12, (3) 267-281.

Ramist, L., Lewis, C., & Mccamley-Jenkins,L. (1994). Student group differences in predicting college grades: Sex, language, and ethnic groups. College Board Report No.93-1,ETS No.94.27. New York: College Entrance Examination Board.

Reisser, L. (1995). Revisiting the seven vectors. Journal of College Student Development, 36, (6), 505-511.

Riding, R.J. & Wigley, S.(1997). The relationship between cognitive style and peersonality in further education student. Personality and Individual Differences, 23, 3, 379-389.

Rogers, B.H. (1984, October). The use of non-cognitive variables in the prediction of Black freshmen's academic performance. Paper presented at the annual meeting of the Southern Association of Institutional Research, Little Rock, Ar.

Ross, S.M., Smith,L.J.,Slavin,R.E.,Madden,N.A.(1997). Improving the academic success of disadvantaged children: an examination of success for all. Psychology in the Schools,34, 2, 171-180.

Santa-Rita, E. (1996). Characteristics of successful students readmitted following academic suspension. Bronx Community College of the City University of New York (ERIC Document Reproduction Service No.ED394537).

Scheffler, L.W. (1969). What 70 SEEK kids taught their counselor. The New York Times Magazine. Nov.16.

Scheier, M.F. & Carver, C.S. (1987). Dispositional optimism and physical well-being: the influence of generalized outcome expectancies on health. Journal of Personality, 55,2, 189- 210.

Scheier M.F., Weintraub, & Carver, C.S. (1986). Coping with stress, Journal of Personality & Social Psychology. 51, 1257 - 1264.

Schwitzer, A.M., Grogan, K., Kaddoura, K. & Ochoa, L. (1993).Effects of brief mandatory counseling on help seeking and academic success among at-risk college students. Journal of College Student Development, 34, 401-405.

Sedlacek, W.E & Brooks, G.C.(1976). Racism in American education:A model for change. Chicago: Nelson-Hall.

SEEK By Laws. (1993). Office of Special Programs, CUNY.

Seligman, M.E.P. (1992). Learned Optimism. New York: Pocket Books.

Seth,K.(1995). Intrinsic motivation to learn: affective and cognitive correlates of learning and problem solving. Dissertation Abstracts, Vol. 56-08, Section B,p.4627.

Sherman, M. (1979). Personality: inquiry and application. New York: Pergamon Press.

Silverman, S. & Juhasz, A.M. (1993). A developmental interpretation of help rejection. Journal of Developmental Education, 17, (2), 24-26, 28, 30-31.

Snyder, C.R. (1994). The psychology of hope. New York: The Free Press.

Spencer, M.B.(Ed.) (1987). Beginnings: the social and affective development of Black children. Hillsdale, N.J.:Lawrence Erlbum Associates, Pub.

Stanley, J.C. (1971). Predicting college success of the educationally disadvantaged. Science,171, 640-647.

Steele, C.M. (1992, April). Race and the schooling of Black Americans. The Atlantic Monthly, pp.68-78.

Steele, C.M. (1997). A threat in the air. American Psychologist,52, 6, 613-629.

Steele, C.M. & Aronson, J. (1995). Sterotype threat and

the intellectual test performance of African Americans. Journal of Personality and Social Psychology, 69,5, 797-811.

Steele, S. (1990). The content of our character. New York: St.Martin Press.

Sternberg,R.J. (1996).Myths, counter myths and truths about intelligence. Educational Researcher, 25,2, 11-16.

Sternberg, R.J. & Williams, W.M. (1997). Does the Graduate Record Examination predict meaningful success in the graduate training of psychologists? A case study. American Psychologist,52, 6, 630-641.

Steward, R.J. (1993). Two faces of academic success: case studies of American Indians on a predominantly Anglo university campus. Journal of College Student Development, 34, 191-196.

Steward, R.J., Jackson,Sr., M.R., & Jackson, J.D. (1990). Alienation and interactional styles in a predominantly White environment: a study of successful Black students. Journal of College Student Development, 31, 509-515.

Steward, R.J. & Krieshok, T.S. (1991). A cross-cultural study of vocational identity: does a college education mean the same for all persisters? Journal of College Student Development, 32, 562-563.

Stewart, D.W. & Deiker, T. (1976). An item factor analysis of the Mooney Problem Checklist. Educational and Psychological Measurement,36, 509-513.

Sweetland, R.C. & Keyser, D.J. (1985). Test Critiques Vol.II. Missouri: Test Corporation of America.

Talbot, G.L. (1990). Personality correlates and personal investment of college students who persist and achieve. Journal of Research and Development in Education, 24, (1), 53-57.

Temp, G. (1971). Validity of the SAT for Blacks and Whites in thirteen integrated institutions. Journal of Educational Measurement, 8, 4, 245-251.

Tennen, H. & Glenn, A. (1987). The costs and benefits of optimistic explanations and dispositional optimism. Journal of Personality, 55, 2, 377-393.

Thompson, B.W. & Tyagi, S. (1993). Beyond a dream deferred: multi-cultural education and the politics of excellence. University of Minnesota Press.

Thompson T. (1997). External attributions for success and avoidance of failure. Psychological Reports, 81, 891-896.

Thorson, J.A. & Powell, F.C. (1988). Medical students' Edwards'Personal Preference Schedule Norms. Psychological Reports, 63, 465-466.

Thorson J.A. & Powell, F.C. (1993). Sense of humor and dimensions of personality, Journal of Clinical Psychology, 49, 6, 799-808.

Thorson, J.A., Powell, F.C., Sarmany-Schuller, I., Hempes, W.P. (1997). Psychological health and sense of humor. Journal of Clinical Psychology, 53, 6, 6005-619.

Tinto, V. (1975). Dropout from higher education: a theoretical synthesis of recent research. Review of Educational Research, 45, 89-125.

Tinto, V. (1982). Limits of theory and practice in student attrition. Journal of Higher Education, 53, (6), 687-700.

Tinto, V. (1993). Leaving college. The University of Chicago Press.

Tinto, V. (1996). Reconstructing the first year of college. Planning for Higher Education, 25,1-6.

Tomlinson-Keasey, C. & Little, T.D. (1990). Predicting educational attainment, occupational achievement,

intellectual skill, and personal adjustment among gifted men and women. Journal of Educational Psychology, 82, 3, 442-455.

Tracey, T.J. & Sedlacek, W.E. (1984). Non-cognitive variables in predicting academic success by race. Measurement and Evaluation in Guidance, 16, 171-178.

Tracey, T.J. & Sedlacek, W.E. (1985). The relationship of non-cognitive variables to academic success: a longitudinal comparison by race. Journal of College Student Personnel, 26, 405-410.

Tracey, T.J. & Sedlacek, W.E. (1987). Predictions of college graduation using noncognitive variables by race. Measurement and Evaluation in Counseling and Development, 19, 177-184.

Trippi, J. & Stewart, J.B. (1989). The relationship between self-appraisal variables and the college grade performance and persistence of Black freshmen. Journal of College Student Development, 30, 484-491.

U.S. Senate, Select Committee.(1972). Report: Toward equal educational opportunity. Washington, D.C.: U.S. Government Printing Office.

U.S. Department of Education (1997, 1996). Survey: College Students. Washington, D.C: U.S. Government Pringing Office.

Vallerand, R.J. & Bissonnette, R. (1992). Intrinsic, extrinsic and amotivational styles as predictors of behavior: a prospective study. Journal of Personality, 60, 3, 599-620.

Vars, F.E. & Bower, W.G. (1997). SAT scores, race and academic performance: New evidence from academically successful colleges. Unpublished Manuscript.

Wallston, K.A. I Wallston, B.S. (1982). Who is responsible for your health? the construct of health locus of control. in Sanders, G.S. &

Suls, J. (Eds.), Social Psychology of Health and Illness. Hillside, N.J.: Erlbaum.

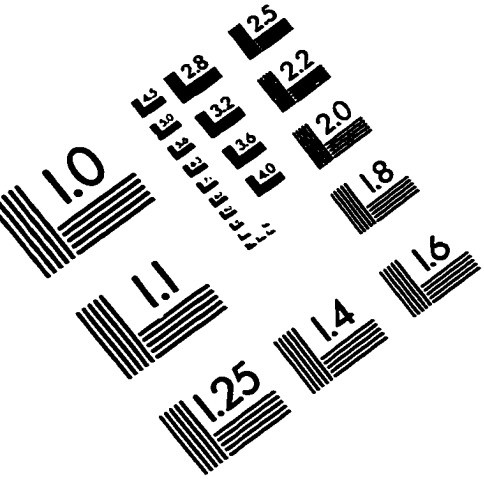
Washington, B.T. (1901) Up from slavery. New York: Penguin Books.

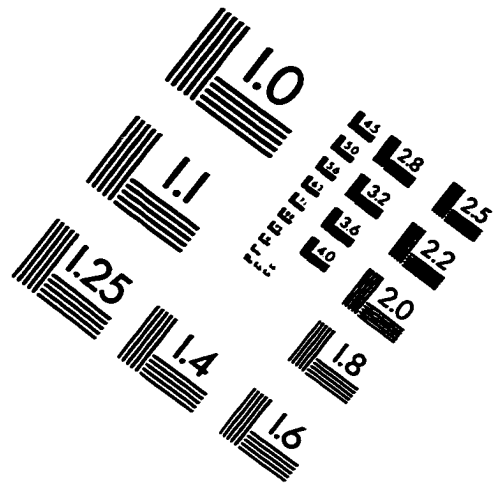
Whitney, W., Cadoret, R.J., & McClure, J.N. (1971). Depressive symptoms and academic performance in college students. American Journal of Psychiatry, 128, 6, 122-126.

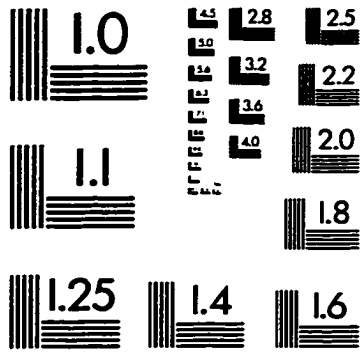
Williams, W.M. & Ceci, S.J. (1997). Are Americans becoming more or less alike? Trends in race, class and ability differences in intelligence. American Psychologist, 52, 11, 1226-1235.

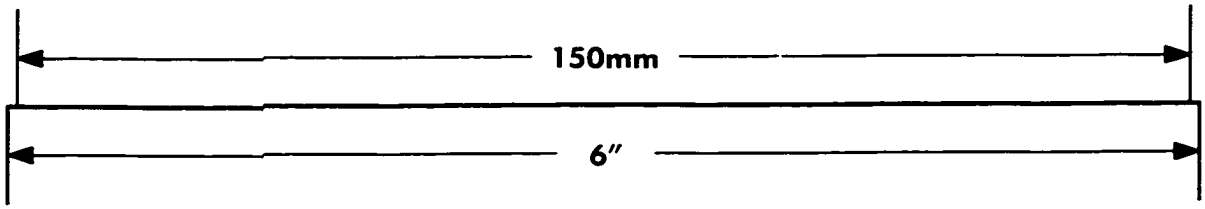
Wittenberg, R. (1968). PostAdolescence: theoretical and clinical aspects of psychoanalytic therapy. New York & London: Grune & Stratton.

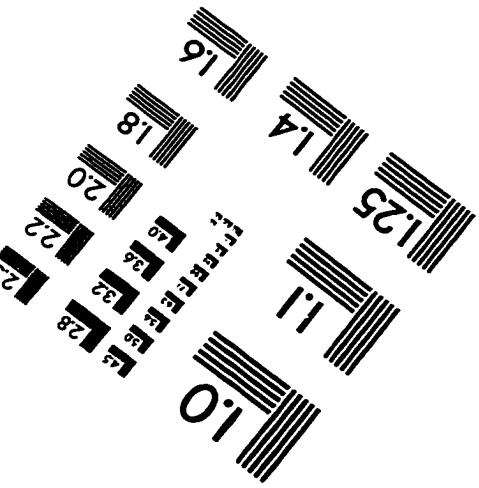
IMAGE EVALUATION TEST TARGET (QA-3)

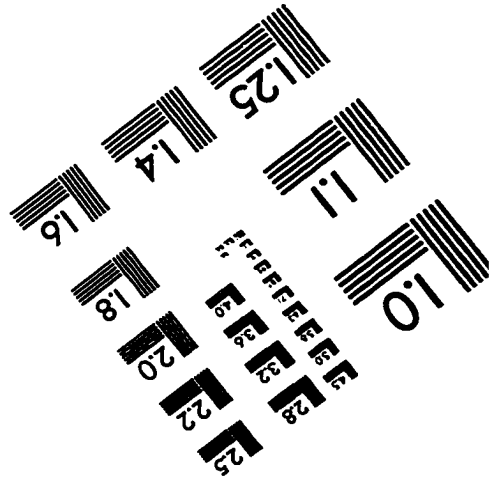












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