Chapter 2

REVIEW OF
LITERATURE
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As mentioned in the proceeding chapter, the present study was undertaken to explore the influence of loneliness, neuroticism, and locus of control on academic performance. In this chapter we will review those studies that bear directly or indirectly to the present problem of investigation. Hence this chapter is divided into four sections. Section I reviews those studies that demonstrate relationship between academic performance and miscellaneous variables. Section II is devoted to those studies that show direct or indirect impact of loneliness on academic performance. Section III deals with the review of such investigations that have explored the role of neuroticism in various aspects of behaviour and finally the last section (i.e. Section IV) of this chapter reviews those studies that have attempted to demonstrate how locus of control influences various dimensions of behaviour including academic achievement. The exhaustive review of all studies provided a fertile ground for the rationale of the present investigation. Thus last part of the study highlights the rationale of present study.

SECTION I

Academic Performance and Miscellaneous Variables

A large number of studies have been conducted to find out various factors, which influence academic performance, but the findings of many of
these studies are divergent. Nevertheless, they have revealed new facts with regard to the academic performance of the students.

It will be a Herculean task to report each study individually. It would not only occupy more space than the present study itself, but also less rewarding. Hence, some important factors, which have emerged out of numerous studies, will be reported here. All the studies, which support or discard a particular factor, will be discussed under that factor. Though there are numerous more factors, which have been reported by researchers, yet only those factors have been taken up which have come out in a large number of studies, except where the studies are limited and their neglect might tell on the present study.

Jamaur's (1961) investigation was carried out on the Indian setting in which he attempted to observe the relationship between some personality variables and academic achievement, and tried to find out whether personality factors affected achievement independently of intelligence. His general conclusion was that achievement depends on personality adjustment of pupils. Among the different dimensions of adjustment; home, emotional, and social adjustment played a vital role. Introversion also seemed to be positively related to academic achievement. Personality adjustment and introversion were observed to be influencing academic achievement independently of intelligence.
Brant and Wendy (1992) in a research suggested that peer-related communication skills and experiences may facilitate academic achievement, especially in the college environment. However, there was substantial evidence that men and women differed in peer-related interaction skills and patterns, suggesting that there may be gender differences in the relationship between academic performance and interaction with peers. Thus far, only one study has systematically examined this gender difference: that of Nezlek, Wheeler, and Rets. In their 1990 work, they reported data that they interpreted as supporting the existence of gender differences in the relationship between the scholastic performance of college students and aspects of their social interactions. Reanalysis of their data showed that there were no gender differences in the relationship between academic achievement and social participation. They also reported a study assessing gender differences in relationships between academic performance and loneliness, communication skills, and social acceptance. Participants (208 college students) completed the revised UCLA loneliness scale, tasks assessing five communication skills, and socio-metric measures providing multiple indices of social acceptance. Cumulative grade point averages (GPAs) were obtained from the university registrar. Although several significant associations were detected between CPA and the loneliness and communication skill measures, no gender differences in the associations were found. The results were discussed in terms of relationships between the orientations that students exhibit toward peers and their studies.
Chemes, et al., (2001) in a longitudinal study, of 1st year university students’ adjustment, examined the effects of academic self-efficacy and optimism on students’ academic performance, stress, health, and commitment to remain in the school. Predictor variables (high school grade point average, academic self efficacy and optimism) and moderator variables (Academic expectations and self perceived coping ability) were measured at the end of the first academic quarter and were related to classroom performance, personal adjustment, stress and health, measured at the end of the school year. Academic self-efficacy and optimism strongly related to performance and adjustment, and both directly on academic performance and indirectly through expectations and coping perceptions (challenge-threat evaluation) on classroom performance, stress, health, and overall satisfaction and commitment to remain in school. Observed relationships corresponded closely to the hypothesized model.

Yip, et al., (2002) used a revised version of the Learning Study Strategy Inventory to examine the relation of study strategy with academic performance of 100 Hong Kong University students. Analysis indicated the high academic achieving group differed significantly from the low academic achieving group in terms of intrinsic disposition factors of motivation, scheduling, concentration, and selecting main ideas.

Aremu (2004) in a study investigated the psychological and sociological determinants of academic achievement of school going
adolescents. Six self-report measures were administered randomly to 280 senior secondary students in Ibadan. Results showed the six psychological and sociological factors (motivation, anxiety and locus of control, self-esteem, parents’ education, parental discipline, culture, and governance) could jointly determine academic achievement of adolescents. Specifically motivation, anxiety, parents’ discipline, and governance were found to be significant in determining academic achievement among adolescents.

El-Anzi (2005) in a study examined the relationship between academic achievement and such variables as anxiety, self-esteem, optimism, and pessimism. The sample consisted of 400 Male and Female students in the Basic Education College in Kuwait. The salient findings of the investigation were the significant positive correlation between academic achievement and both optimism and self-esteem, whereas the correlation was negative between academic achievement and both anxiety and pessimism.

Casanova, et al., (2005) in their study compared the distribution of parental educational style and the scores reported both by parents and students for various family characteristics (acceptance control, involvement and expectations) and socio-demographic factors (socio-economic status, family structure, number of children and order of birth of the children) in a group of adolescents with normal achievement (n =205). Likewise, it was examined which variable best predict academic achievement in the two groups among adolescents. The results indicated differences in the distribution of parental
styles in the two groups for the majority of the variables analysed. They also observed a differential pattern in the prediction of the academic success. In the group of adolescents with normal academic achievement, socio-demographic variable better predicts achievement for students than with low achievement. Moreover, family variables play a more important role in predicting achievement.

Marjoribanks (2005) examined the relations among the family background, adolescents' academic achievement, aspirations, and young adults' educational attainment. Data were analysed from the longitudinal surveys of Australian youth (4, 500 men, 4,804 women; mean age = 20.1 year, SD = 0.4). Multiple regression analysis indicated that, while family background and academic achievement measures had median associations with attainment, adolescents' educational aspirations made a large contribution to explain differences in young adults' educational attainment.

Chamorro-Premuzic and Furnham (2003), Investigated the extent to which personality traits predict academic performance. British University Students (N = 247) completed the NEO-PI-R (Costa and Mc Crae, 1992) Personality Inventory at the beginning of their course and took several written examination throughout their three year degree. Personality Super Traits (especially conscientiousness positively, and Extraversion and Neuroticism negatively) were significantly correlated with examination grades and were found to account for around 15% of variance. Primary traits were also
examined and result showed significant correlation between a small number of these traits (notably dutifulness and achievement striving positively, and anxiety and activity negatively) and academic achievement. Furthermore, selected primary personality traits (i.e. achievement striving, self discipline, and activity) were found to explain almost 30% of the variance in academic examination performance. It is argued that personality inventory results may represent an important contribution to the prediction of success and failure in university (Particularly in highly selective and competitive settings).

Somaratne and Weeraktoon (2005) in their study try to trace the relationship/s between educational qualification at the entrance of B.Sc undergraduate Student and their performance. The students of the Faculty of Natural sciences of the Open University of Sri Lanka (OUSL) were taken as a target population for this study. Considering the results of previous studies, a sample of students who graduated from 1998 to 2001 was selected. The educational qualifications at the enrolment and undergraduate performance profiles of selected sample were taken from the student’s personal records and data were scored and analyzed.

The results of this study indicated that the score as well as the age of the student at entry to OUSL vary widely and show a clear relationship to academic performance. The younger students indicate higher performances because they entered the OUSL immediately or shortly after leaving school and their current knowledge in the relevant subjects that may facilitate their
undergraduate studies. In addition, they tend to keep close contact with their peer than the older, married, and employed students. According to the findings, there is no discernible difference performance of students who followed foundation courses and those having only three passes in A/L. However, the students who possessed additional education qualification performed more or less equally as students with good A/L grades, but not extremely well as was expected.

This study suggests, in general, hard working, above average intelligence and motivation in learning, and the two factors: age and scores at the entry play major roles in creating the disparity in the product of undergraduate learning in distance mode. Previous exposure to open learning methodology or the possession of additional qualification does not exert a considerable influence on academic performance in distant studies. The early exposure to OUSL methodology or additional qualification at entry seems to be contributing less to the performance.

Silliker and Jeffery (1997) investigated whether extracurricular activity participation enhances the academic performance of high school students. Participants were 123 high school students who participated in interscholastic soccer. Data show participants had significantly higher GPAs in-season vs. out-of-season.

“A study by the U.S. Department of Education revealed that student who participate in co-curricular activities are three times more likely to have a
grade point average of 3.0 or better” than the students who do not participate in co-curricular activities (Stephens and Schaben, 2002, Para. 4). In addition to co-curricular activities or extracurricular activities, “analyses revealed that regardless of students’ background and poor achievement, various parenting, volunteering, and home learning activities positively influenced students grades” (Simon, 2001, para. 1). Numerous studies have examined the factors influencing students’ extracurricular activities and many activities were found to have a significant influence.

**Broh (2002)** found “Total Extracurricular Activity Participation (TEAP) or participation in extracurricular activities in general, is associated with an improved grade point average, higher educational aspirations, increased college attendance, and reduced absenteeism”. Guest and Schneider (2003), in looking at the previous research on this subject said, “Researchers have found positive association between extracurricular participation and academic achievement” (Para 2).

Varying amounts of television viewing have different effects on academic performance. “Researchers have stated that a negative relationship does not begin to manifest itself until a child exceeds a 10 or more hour per week threshold, with the strongest negative relationship observed for 30 or more hours of viewing” (Thompson & Austin, 2003, p. 195). One study actually showed that “television viewing has a positive impact up to a certain
amount and a negative impact after a point of saturation" (Thompson &

Although the amount of time a student watches television each week has
an impact, so does the quality and type of programming he or she is reviewing.
If students watch highly informational programs, such as news programs and
documentaries, they have a greater opportunity to increase in knowledge and
learn. Alternatively, if they watch mostly low informational programs, such as
fast-action shows, cartoons, or music videos, “an opportunity for a detrimental
academic impact is increased” (Thompson & Austin, 2003, p. 197).

Most research found a negative relationship between television viewing
and academic performance; however, there are some instances where television
may actually have a positive effect. These instances are few and far between;
the most common theory is that there is a negative relationship between the
two.

The presence or absence of these “ideal” parent-Child relations can
make a big difference in students’ work in school. Studies of parent-child
relations—whether reported by parents or child or observed, show that the
supporting, approving, encouraging, understanding parents foster achievement.
The parents of the underachieving students are relatively more often restrictive
or neglectful in guidance, harsh or indifferent in discipline, and either “baby”
or “push” their children excessively in learning.
In a study of 30 poor readers ranging in age from 7 to 13 and in IQ from 91 to 140, Missildine (1946) reported a variety of unhealthy parent-child relationship of these underachieving children, the mothers of 10 were characterized as "tense, coercive, and perfectionist in demands." They gave them too little support, guidance, and love. Among the remaining 10 children, 4 had problem of sibling, rivalry over a new baby, 2 were overindulged until they entered school and then were neglected; 2 were overprotected; and 1 child was disturbed in transferring to a new school. Although all these maladjusted children were intellectually inefficient, they reacted differently to their unhappy family relationships. "Some assumed a restless, indifferent, happy go lucky pose.....others felt crushed, unhappy, and inadequate."

In a study of high and underachieving bright high school students, Pierce and Bowman (1960) found significant differences in the parents' attitudes. Those of the high achievers, themselves better educated, held higher aspiration for their children, encouraged their achievement more, believed themselves more responsible, and engaged more often in such intellectual pursuits as science and music than those of the underachievers. Morrow and Wilson (1961) found differences between high-low achieving high school students in the encouragement and discipline they felt their parents gave them. The achievers experienced more parental approval, trust, and encouragement. They felt that there was better family morale, more sharing of ideas, and
greater confidence in them. The underachievers felt that discipline was more
strict and harsh.

A large number of variables included in the background factors are
parental education and occupation, family income, size of the family and
education, income and occupation of different members of the family. It also
includes the caste and sex of student. These variables were found to influence
academic performance. Thus studies have tried to locate relationship between
these variables and academic performance. Some important studies in this area
are being quoted below.

Watson (1965) and Roberts (1962) have found that the parents of high
achievers had higher formal education than those of low achievers. Dugan
(1952) found that the students with low academic achievement lacked in
educational tradition. But contrary to it, Lacivita (1966) in a study of
acquisition of grammar in 2
nd, 4
th and 6
th grade children found that there was
no significant difference between the children having linguistic advantage due
to better socio-economic status of the family and those from lower socio-
economic group.

Pillai (1970) has found that the family income has a positive
relationship with academic performance. Chopra (1967) has reported the
parental occupation is positively related to the academic achievement of
standards. Austin (1964), Benur (1967) and Patil (1966) also found that
socio-economic status is positively related to the academic performance, but
contrary to it Kenneth (1967) has found that socio-economic status is not a significant factor in determining academic achievement. Joshi (1974) has found that socio-economic status of the students from high achieving schools was significantly higher than that of the low achieving schools.

Roberts (1962) reported that in his study he found that the fathers of high achievers were engaged in high ranking professions. Pathak (1971) has also found that high achievers tend to come from higher occupational categories. Roberts (1962) has reported that family size, home duties performed and home adjustments do have influence on academic performance.

Ashbury (1974) has found after studying 1773 sixth graders that the middle socio-economic group contributed a large number of both under-achievers and over-achievers. He also found that the ratio of males to female under achievers was 2:1, but the converse was true in the case of over-achievers, Ashbury (1974) has reported Tiegland (1966) who found the ratio between the male and female under-achievers was 3:1.

Joshi (1974) has found that low achievement of students at the secondary examination was due to both the non-academic atmosphere at home and poor economic condition of the parents. Despite the fact that the socio-economic status plays an important role in contributing to academic performance, it can not be categorically concluded that high socio-economic status invariably tend to produce high academic performance since studies contrary to it are equally significant. But most of the studies reveal a high
positive correlation between socio-economic status and academic performance and some studies also reveal high positive coefficient of correlation between intelligence and socio-economic status.

McLean (1997) conducted a study using a sample of 69 high achieving matriculation students and 55 low achieving General Diploma students from 4 high schools in North Western Alberta. The School Attitude Measure was used to gain basic information about several dimensions of students’ attitude towards school and to gain significant data concerning the relationship between students’ attitude and school performance. Findings from the study showed the significant attitudinal differences between high and low achieving students on all 5 attitudinal factors comprising the research instrument. As well, 2 variables Locus of Control and reference-based academic self concept, accounted for most of the difference between the upper-or lower-achieving groups.

Lundgren, Sampson and Cahoon (1998) used a symbolic interactinist viewpoint to examine similarities and differences between the sexes in response to evaluative feedback about academic performance. 117 male and 123 female undergraduate’s affective reactions and tendencies to accept high and low course grades were composed. Women and men were similar in assimilation of positive feedback and rejection of negative feedback. Only women showed significant relationship of scores on self-esteem with positive affective responses and rated acceptance of positive feedback.
Drew and Watkins (1998) investigated the interrelationship of affective variables, learning approaches, and academic achievement. It was hypothesized that academic causal attributions and academic self concepts affect the learning approaches the students adopt and subsequently influence achievement outcomes. Ss were 162 male female Hong Kong Chinese University students enrolled in 1st year full-time nursing, radiography and language and communication courses. Measures of academic causal attributions, academic self concepts, learning approaches, and academic achievement were obtained. Structural equation modeling techniques were used to test the relationship among the variables. It was shown that, as predicted, both academic casual attributions and academic self concept influenced academic achievement indirectly via students' learning approaches.

Locus of Control was significantly and negatively related to the surface approach to studying while academic self-concept had a positive significant influence on the deep approach. Both the surface and the deep approaches to studying showed significant direct effect on academic achievement.

Landine and Stewart (1998) examined the relationship between meta-cognition and certain personality variables and role they play in the academic achievement. Measures of meta-cognition, Motivation, Locus of Control, and Self-efficacy were used. These measures were administered to a sample of 108 Grade 12th Students in New Brunswick and Newfoundland. The results indicated significant positive relationship between meta-cognition, Motivation.
Locus of Control, Self-efficacy, and Academic average. It was concluded that meta-cognition and these personality variables are related to academic achievement.

Social Comparison Theory has linked improved performance to both the tendency to compare with others who are performing well and the tendency to view the self as better than others. These two tendencies are assumed to be opposite to each other. However, the results of longitudinal study of 876 students in their first year of secondary education by Blanton; Bunk; Gibbons and Kuyper (1999) indicated that both variables independently predicted improved academic performance and that these two tendencies did not conflict.

Georgiou (1999) investigated the role of parental attributions as predictors of parental involvement in their child’s educational process and examined the influence of both of these factors on the child’s actual school achievement. The parents of 473 sixth grade students in 22 public elementary schools in Cyprus participated in the study. Data were also collected from the students and their teachers. It was found that the child’s actual school achievement was directly related to the parental interest-developing behaviour, but it was not significantly related to the parental controlling behaviour. A line of influence existed between parental attribution style, the type and the degree of parental involvement and the child’s actual academic achievement.
Gerardi (2005) advocated that academic self-concept, rather than the traditional cognitive skills was significant predictor of academic performance among minority and low income students in an urban technical college.

Lan (2005) in his threefold dissertation found that Socio-Economic Status has a significant and positive effect on nurturant parenting and on adolescents' academic achievement, which in turn, affect adolescent self-esteem. MANOVA results showed a gender effect for academic achievement and a grade effect of parental education on adolescents' academic achievement.

Jeynes (2005) using the 1992 NELS data set, assessed the effects of three aspects of parental involvement and family structure on the academic achievement of those children. It was found that family structure and two of the three aspects of parental involvement were associated with higher adolescent academic achievement, when gender, race, and socio-economic status are controlled. Family structure was the single greatest predictor of academic achievement and the extents to which parents discussed school issues and attended school function also had a positive impact on adolescents' academic achievement.

Stewart (2006) found that several of the family influence variables directly or indirectly affected 12th grade academic achievement. Furthermore, most of the individual influence variables were directly related to 12th grade achievement. A surprising finding from this study was the non-significant effect of family income on 12th grade achievement. Overall the findings
supported the notion that family and individual-level characteristics are important predictors of academic success among African American students.

**Abd-El-Fattah (2006)** in a study revealed that students' perception of parental involvement factors was the most important predictor of academic achievement, followed by parents' education, and family school disengagement. Students' perception of at-school parental involvement and parents' education had an indirect effect on academic achievement through their effect on school disengagement. Parents' education was the most important predictor of school disengagement. There was a reciprocal relationship between academic achievement and school disengagement.

**Ribadu (2006)** examined the influence of family cohesion, family adaptability, self-image, and locus of control on two measures of academic achievement among male and female adolescents. Using a self-administered questionnaire, data were gathered from a convenient sample of 230 students from five high schools in San Bernardino County in Southern California. Family cohesion, family adaptability, self-image and locus of control were significant predictors of both measures of academic achievement. Also, family cohesion and family adaptability was weightier predictor of GPA more so than self-image and locus of control suggesting the importance of family to academic achievement among adolescents.
SECTION II

ACADEMIC PERFORMANCE AND LONELINESS

Loneliness is a very important personality trait. According to Weiss (1973), there are two sources of loneliness, first is “emotional isolation” and the other one is “social isolation”. If either type of isolation lasts too long, lonely people, may sink into a self-critical depression (Peplau, Russell and Heim, 1979). Feelings of loneliness cannot be understood by studying actual isolation. Certain events of life such as the break up of a dating relationship, or a marriage, widowhood, moving away from home, loosing a job, quarreling frequently with family and friends may set the stage for loneliness (Rubenstein and Shaver, 1982). It is interesting to note that loneliness depends on how a person interprets and react to these events overtime. Peplau and Perlman (1982) and Weiner (1985) have identified three styles of thinking that are related to prolonged loneliness and unhappiness.

Anderson, Horowitz and French (1983) observed that people who believe their loneliness is the result of internal, stable cause tend to feel depressed and helpless and remain stuck in their misery, whereas people who believe their loneliness is due to controllable, temporary causes whether internal or external, are more likely to fight back, to make new friends, to change themselves or their circumstances. In view of these findings it is assumed that lonely persons who differ with respect to their beliefs about the
causes of their loneliness may also differ with respect to their academic performance.

More specifically, it is assumed that the people who are high on loneliness scale are expected to show poorer academic performance as compared to those individuals who are low on loneliness scale.

Deppe (1987) in his research investigated the relationship between gender and academic achievement levels and the variables of loneliness and self-esteem in college students. The sample consisted of 252 college students in a large Southwestern University. Subjects were administered the Revised UCLA Loneliness Scale, the Index of Self-Esteem, and a demographic information sheet. Deppe (1987) used a two-by-three multivariate analysis of variance to analyze the data. Gender and academic achievement levels were the fixed, categorical, independent variables. The dependent variables of loneliness and self-esteem were tested for significance in males and females across three levels of academic achievement: high (4.00-2.96), medium (2.95-2.13), and low (2.12-1.00).

Examination of the data indicated that a significant construct was formed between the combined variables with each of the independent variables. Gender and academic achievement level had a significant relationship to self-esteem, while singularly; loneliness was not affected by gender or academic achievement level. Conclusions of the study were that males were expected by society in general to achieve at a higher rate than
females, and that loneliness has no boundaries of generation, race, culture, or gender.

Demir and Tarhan (2001) in a study investigated the relationship of socio-metric status, gender, and academic achievement to loneliness levels among Turkish adolescents. Participants were 370 secondary school students. Results revealed that socio-metric status was significantly related to loneliness and social dissatisfaction as a function of peer relations. Members of the rejected group reported significantly higher levels of loneliness and social dissatisfaction than did members of the controversial, popular and neglected groups; the controversial group was also significantly different from the popular group in loneliness levels. No significant gender difference were found, results also revealed a significant negative relationship between achievement scores and loneliness including that as the level of loneliness increased, academic achievement decreased.

Ying (2003) in a study examined the academic performance and quality of overseas study in a group of 155 Taiwanese graduate students at approximately one year after arriving in the United States. The international students’ academic performance was significantly predicted by better English writing skills and pursuits of an Engineering degree, while the quality of their overseas study was predicted by more relationship with Americans, fewer problems with loneliness, and majority in Engineering or social sciences and humanities.
Tümkaya, Aybek and Çelik (2008) investigated the correlation between the life satisfaction and loneliness levels of students of Faculty of Education with respect to age and gender variables. The participants were students at the Educational Faculty of Çukurova University in Adana/Turkey. The sample consisted of 422 students, 223 female and 199 male. Their life satisfaction and loneliness levels were measured by the “UCLA Loneliness Scale” and “Life Satisfaction Scale”; also “Personal Information Form” is used to gather personal information. To analyze data, t-test, one-way ANOVA, stepwise regression and correlation statistical techniques were used. The research findings showed that the male students’ loneliness level is higher than the female students’ loneliness level. There was no significant difference found between male and female students’ life satisfaction. Beside, the correlation between age and loneliness level showed that, loneliness level increased with the increase of age. Further, it was found that three variables have a considerable contribution to predicting the life satisfaction. The predictor variables of life satisfaction, unemployment anxiety, socio-economic status and grade level accounts for 23% of total variance, $F (3,419) =8.39$, $p< .001$. However, there was a negative correlation between life satisfaction and loneliness level. Based on research findings, researchers suggest that the psychological counseling and guidance services of university must be functionalized and improved to increase students’ life satisfaction and to decrease loneliness level.
SECTION III

ACADEMIC PERFORMANCE AND NEUROTICISM

Neuroticism is generally conceived as emotional instability. Traits of neuroticism include being calm or anxious, composed or excited, poised or nervous. Neurotic individuals are generally complainers and defeatists. While analyzing the personality characteristics of neurotic individuals, Conley (1984) and McCrae and Costa (1984) observed that these persons complain about different things at different ages and are always ready to see the soar side of life and none of its sweetness.

Neuroticism is also referred as negative affectivity. Since it has been demonstrated that emotions tend to occur in cluster i.e., a person who feels one negative emotion tend to feel others, it is therefore expected that the trait negativity (NA) describe a person’s tendency to feel anger, scorn, guilt, anxiety, sadness, and other negative moods (Watson and Clark, 1984). Watson and Pennebaker (1989) have demonstrated that High NA people frequently feel worried and tense even in the absence of objective problems. They further found that High NA people as compared to Low NA people complain more about their health and report physical symptoms even in the absence of health problems.

In view of such findings the present investigator directed his attention towards academic performance of these individuals. Numerous researchers
assumed that Low NA students are likely to show better academic performance as compared to the High NA students. A large number of studies were carried out to test this assumption. The findings obtained by various researchers are quite conflicting. For instance, Furneaux (1956), Lynn (1959), Biggs (1959), Goh and Moore (1978) and Savage (1972) obtained a positive correlation between academic achievement and neuroticism.

Lynn (1959) studied two personality characteristics related to academic achievement. Levels of neuroticism and extraversion were assessed in university students and controls by means of the Maudsley Personality Inventory. University students were all in their first year at university; mean age of women= 18.8, mean age of men=19.2. Controls used were (a) sixty seven female occupational therapy students of the same age (mean age= 18.5) and social background as the female university students but differing in academic motivation; (b) 100 male apprentices aged 16-19 years whose scores on neuroticism and extraversion were taken from a study by Field (1959). The result supported the two predictions at a significant level and extended the findings of Furneaux (1956) and Broadbent (1958). Moreover, they showed that extraversion has wider detrimental effects on educational attainment than Furneaux concluded on the basis of his work. This conclusion followed from the quite large differences in extraversion between the university students and the occupational therapists and apprentices. Since university entrance is obtained largely on performance in ‘A’ level, the results suggested that
educational attainment at school is substantially affected by the introversion-extraversion dimension.

Sarnoff et al., (1959) and Bending (1960) found no association between neuroticism and academic performance. McCandless and Castaneda (1956) and Savage (1962) found negative correlation between neuroticism and academic achievement.

McCandless and Castaneda (1956) studied anxiety, school achievement and intelligence among children. Intelligence test data were available only for the sixth grade groups of the fourth, fifth and sixth grade public school population that were used as subjects for the study. This study was conducted to report the correlations between anxiety as defined by the score for the CMAS, academic achievement as measured by the Iowa Every Pupil Test (IEPT), and intelligence as measured by the Otis Quick Scoring Mental Ability Test, Form B (Otis). These two tests were administered within a week of each other by classroom teachers. Thirteen of 30 computed relationships between anxiety and school achievement were found to be significant. The multiple correlations of anxiety and intelligence with the composite score on the IEPT were computed. Recomputations of the relationship between anxiety score and composite IEPT score for these populations showed an \( r \) of -.32 for boys, -.59 for girls. Both the anxiety and the L score from the children’s form of the manifest anxiety scale were found to be related to school achievement, most strongly for the sixth grade portion.
of a fourth, fifth and sixth grade public school population. The anxiety score was also significantly related to intelligence for the sixth grade girls, but for both sixth grade girls and boys, it retained significant relationships with school achievement when intelligence was partialled out. A small contribution to prediction of academic achievement by the anxiety score, over and above the predictive efficiency of intelligence alone, was found for sixth grade boys and girls. Furthermore, Walsh and Walsh (1978) found a curvilinear relationship between neuroticism and academic performance.

Neuroticism, when studied in connection with achievement discrepancy, shows similarly conflicting results. For integrators like, Eysenck (1957), Lynn and Gordon (1961), good educational attainment was facilitated by neuroticism.

Several recent studies of the relation of personality factors to educational success and failure have reported findings interpreted in terms of the theory of personality advanced by H.J. Eysenck (e.g., 1952, 1957). Briefly, this theory in its present form posits four principal dimensions of personality, which are virtually independent of each other and are designated neuroticism, introversion-extroversion, psychoticism, and general intelligence. As far as educational success and failure are concerned, recent reports have shown that academic success, while obviously correlated highly with general intelligence, has also positive associations with introversion and neuroticism. The association between educational success and introversion is the more firmly
established relationship and the evidence for it can be summarized briefly as follows:

A tendency for introverted university students to do well academically has been reported by Furneaux (1956) and Broadbent (1958) in England and by Bending (1960) in the United States; and there is evidence that introversion favourably affects the attainment of school children in the Advanced Level examinations (Lynn, 1959). There is also indirect evidence supporting these findings, e.g., (1) delinquents have extraverted behaviour patterns and tend to be educationally retarded (e.g., McCarthy, 1954). (2) Introverts tend to be leptomorphic in body build (i.e., to be thin in relation to their height) and leptomorphic children tend to be good readers (Eysenck, 1959a) (3) Women tend to be more introverted than men (Eysenck, 1959b) and girls do better than boys in England in the eleven plus examination (Yates and Pidgeon, 1957) and do better academically in the United States (Terman and Tyler, 1954). (4) Brain injured people tend to be extraverted (Eysenck, 1957) and brain injured children tends to be poor academic attainers in relation to their intelligence (Stephen, 1958).

The findings concerning neuroticism and attainment are less well established. A positive correlation between neuroticism and attainment in university students was found by Furneaux (1956). Consistent with this is the finding that university students score more highly on tests of neuroticism than other young people (Lynn, 1959), which suggests that neuroticism is a factor in
educational success. On the other hand, Bending (1960) found no association between neuroticism and attainment in American university students. There is a fairly considerable literature on the relation between anxiety and attainment which is of interest in this connection because anxiety and neuroticism are highly correlated, although anxiety is also associated with introversion. There is some evidence that anxious children tend to be good readers (Lynn, 1955; Biggs, 1959). But Sarnoff, et.al., (1959) found no association between anxiety and attainment in the eleven plus examination and investigations in the United States frequently report negative correlations between anxiety and attainment (e.g., McCandless and Castaneda, 1956). The relation between neuroticism and attainment is evidently in considerable confusion. The English studies tend to suggest that the relationship is positive, and the American findings that it is negative.

Since the findings regarding the association between neuroticism and academic attainment are conflicting, Lynn and Gordon (1961) undertook an investigation with the objective to resolve the controversy pertaining to association between neuroticism and educational attainment. More specifically they investigated relationship between personality factors such as neuroticism, introversion-extroversion, intelligence and educational attainment.

Lynn and Gordon (1961) studied the relation neuroticism and extraversion to intelligence and educational attainment. The subjects were comprised of sixty male university students living in a university hall of
residence accommodating seventy-nine students. Students were asked to volunteer for the testing and first sixty to do so were taken as subjects. All students fell within the age range 18-23. The tools used were (a) Maudsley Personality Inventory to measure neuroticism and introversion-extraversion; (b) Mill Hill Vocabulary test, scales A and B; these scales were summed to give a total vocabulary score; (c) Raven’s Progressive Matrices, (1938). Subjects were instructed to attempt odd numbers only because of the importance of making the test short; subjects were further instructed to work primarily for accuracy but at the same time to work at speed. The findings supported the findings obtained by Lynn (1959). Thus, Lynn and Gordon (1961) found (1) there was a positive correlation between introversion and persistence and (2) between neuroticism and size of vocabulary; (3) there was a curvilinear relation between neuroticism and score on Raven’s matrices, subjects in the middle range of neuroticism doing best; (4) and (5) there was no significant correlation between either neuroticism or introversion and intelligence.

According to a study conducted in India by Mohanta (1965) suggested that high achievers were, in general, less neurotic.

Eysenck and Cookson (1969) conducted a study on 4,000 eleven-year-old boys and girls. On the basis of analysis by correlation and analysis of variance methods neuroticism was found negatively correlated with academic
achievement yielding, “smaller but still highly significant correlations” that ranged from -.06 to -.011.

**Jensen (1973)** investigated the relationship between extraversion, neuroticism and lie, and academic achievement in three ethnic groups of school children. Scores on the junior Eysenck Personality Inventory of some 2,000 white, Negro, and Mexican-American school children, ages 9 to 13, were examined in relation to measures of intelligence and Home environment as predictors of scholastic achievement. The JEPI scale show quite low but significant and systematic correlation with achievement; Extraversion (E) correlated positively and Neuroticism (N) and the Lie (L) scale correlated negatively with achievement. The independent contributions separately of E, N and L to achievement variance accounted for by the ability and background measures were negligible, but the three JEPI scales combined in a multiple regression equation along with measures of intelligence and home background independently contributed a small share of the predicted part of the scholastic achievement variance. In this the three ethnic groups did not differ appreciably or systematically, nor did the school grades from 4 to 8 (ages 9 to 13), although three were significant and systematic age and ethnic group differences in mean scores on the JEPI scales.

**Maqsud (1980)** studied extraversion, neuroticism and intelligence in relation to academic achievement. In this study investigator found “Neuroticism did not discriminate the subjects on achievement.
Astoning (1960) conducted a study on personality and academic performance in a Boy’s Grammar school. The investigator found that all levels successful boys received significantly higher ratings than unsuccessful boys for persistence, independence, and interest. Dominance seems to have no consistent relationship with academic achievement. Successful boys showed a slight tendency to be nervous, more emotionally stable, and extraverted and sociable than their unsuccessful class fellows.

Savage (1962) in his experimental studies has suggested that personality factors in particular; neuroticism and extraversion are important determinants of academic performance. The Moodsley Personality Inventory was given to first year university students over three years and scores on this was related to academic performance at the end of their first year. Analyses of variance and correlation techniques showed that high scores on both factors were negatively related to academic performance.

The findings concerning neuroticism and attainment are less well established. Furneaux (1956) found a positive correlation between neuroticism and attainment in university students. Consistent with this is the finding that the students score more highly on test of neuroticism that other young people (Lynn, 1959), which suggests that neuroticism is a factor in educational success. On the other hand, Bending (1960) found no association between neuroticism and attainment in American University Students.
Rao (1963) investigated the role of certain aspects of personality and academic adjustment for academic performance of three hundred and five Arts and science students. He found that academic achievement and certain aspects of personality like neurotic difficulties; morale and sense of responsibility had a positive relationship.

Mwamwenda (1995) examined the relationship of academic achievement or grades with Eysenck Personality Inventory scores on Neuroticism and Extroversion. Contrary to theoretical expectations and previous studies, no significant differences among means were observed for 118 first year South Asian University Students.

Diseth (2003) investigated the relationship between personality, approaches to learning, and academic achievement. Two different undergraduate students’ samples, totaling 310 students, participated in the study. Results showed that the achievement was positively correlated with neuroticism, openness, and deep approach, and negatively correlated with agreeableness.

The effect of personality trait on achievement also varies depending on ability and age level: Entwistle’s (1972) review of studies involving Cattell’s 16 Personality Factors and Eysenck’s Personality Inventory showed that college success is associated with introversion, but at the primary school level, success is related to stable (Low Neuroticism) extraversion. According to Child (1969), both introversion and neuroticism are advantageous traits for
university students’ academic achievement because introverts avoid social situations and enjoy bookish and abstract or conceptual pursuits, and neurotic have a higher level of internal drive.

Child (1969) conducted a comparative study of personality, intelligence and social class in a technological university. The majority of freshmen in the October, 1966, intake at the University of Bradford were asked to complete the Eysenck Personality Inventory (Eysenck & Eysenck, 1964) and the Nufferno Level Test (Furneaux, 1956) at the beginning of their first term. The final sample, which amounted to 92 percent of the total October entry after the elimination of incomplete and unreliable test forms, consisted of 504 men and 103 women. Mean and SD were computed on the basis of final scores. The Bradford sample was found to be significantly introverted, when compared with the population, but extroverted when compared with the student norms. The neuroticism scores revealed a marked tendency for Bradford students (along with Eysenck’s student sample) to be neurotic as compared with the normal population. However, Bradford students were not noticeably different in their scores from Eysenck’s university students. The notion that introversion is a characteristic of students in higher education is supported by the sample in this study.

However, Eysenck and Cookson (1969) in a study of children aged 11 to 13 showed a negative relationship between neuroticism and academic achievement.
McKenzie et al., (2000) investigated the neuroticism –superego interaction or Furneaux Factors in a sample of 110 modular, social science degree students at the University of East London. Negligible or negative correlation between neuroticism and academic achievement were found for the low superego group of students. For the high superego group the correlation were positive, reaching 0.48 (P<0.02) for final degree classification. From the low to the high superego group there was an increase of 0.46 (P< 0.05) in the previous correlation between neuroticism and achievement from first year of the course.

Chamorro-Premuzic and Furnham (2003) investigated the extent to which personality traits predict academic performance in two longitudinal studies of two British University Samples. Academic performance was assessed throughout a three year period and via multiple criteria (e.g. exams and final year project). Results suggested that neuroticism may impair academic performance, while conscientiousness may lead to higher academic performance. In sample 2 (N = 75), the EPQ-R was used as the personality measure, and result showed the three super factors were the most powerful predictor of academic performance, accounting for nearly 17% of the unique variance in overall exam results. It was demonstrated that (like Neuroticism) Psychotism could limit academic success.

Chamorro-Premuzic, Furnham, Dissou and Heaven (2005) reported data on the psychometric relationship between personality traits (Big Five).
and preference for particular assessment methods in an Australian sample of University students (N = 125). Reliability analysis showed that participants tended to have consistent attitudes toward assessment methods, across disciplines (e.g., History, Biology, and Psychology). When these preferences were examined with regard to individual differences in personality, correlations revealed significant associations between three of the Big Five personality dimensions and attitudes towards assessment methods. Neuroticism was negatively correlated with both preference for an oral exam and continuous assessment. Extraversion and Openness to Experience were both positively correlated with preference for oral examinations, and Openness was also significantly and negatively related to preference for multiple-choice exams. On the other hand Agreeableness and Extraversion were both significantly and positively related to preference for group work. A series of hierarchical regressions examined the predictability of preferences for assessment methods by the Big Five factors, as well as self-assessed intelligence and gender. They showed that personality traits were significant predictors of preference for oral exams and group work, even when gender and self-assessed intelligence were considered. Neuroticism was negatively and significantly correlated with preference for oral examination, however there was a negative correlation between preference for continuous assessment and Neuroticism. Extraversion was also a positive predictor of preference for group work, whereas Neuroticism was a negative and significant predictor of
preference for continuous assessment. Further, it was concluded that the Neurotic students seem to have a tendency to dislike oral examinations.

**Laidra, Pullmann and Allik (2006)** studied general intelligence and personality traits from the Five-Factor model as predictors of academic achievement in a large sample of Estonian schoolchildren from elementary to secondary school. A total of 3618 students (1746 boys and 1872 girls) from all over Estonia attending Grades 2, 3, 4, 6, 8, 10, and 12 participated in this study. Intelligence, as measured by the Raven’s Standard Progressive Matrices, was found to be the best predictor of students’ grade point average (GPA) in all grades. Among personality traits (measured by self-reports on the Estonian Big Five Questionnaire for Children in Grades 2 to 4 and by the NEO Five Factor Inventory in Grades 6 to 12), Openness, Agreeableness, and Conscientiousness correlated positively and Neuroticism correlated negatively with GPA in almost every grade. When all measured variables were entered together into a regression model, intelligence was still the strongest predictor of GPA, being followed by Agreeableness in Grades 2 to 4 and Conscientiousness in Grades 6 to 12. Interactions between predictor variables and age accounted for only a small percentage of variance in GPA, suggesting that academic achievement relies basically on the same mechanisms through the school years.

**Pallegama, Ariyasinghe and Parera (2007)** explored the association between personality traits (extroversion, neuroticism and psychoticism) and the students’ attitudes towards the academic program (perceived difficulty of the
program) and academic performances. The null-hypothesis that there would be no association between neuroticism, extroversion and psychoticism levels of students and their attitudes towards the difficulty of the course and the academic performances was tested. Students GPA showed a significantly negative correlation to the degree of psychoticism (Pearson Correlation Coefficient = -0.26, P=0.004). The degree of neuroticism showed a significantly positive association to the perceived difficulty of course by students (Pearson Correlation Co-efficient= 0.22, P=0.016). The results reveal that the personality dimensions have a considerable influence on the academic performance of students. These observations are in agreement with previous findings except the fact that extroversion had no association with the academic performances. As the degree of psychoticism and neuroticism shows significant association with the way the students perceive the difficulty of the course and the medium of instruction, probably these could be acting as the confounding factors at this instance.

SECTION IV

ACADEMIC PERFORMANCE AND LOCUS OF CONTROL

There is a fairly considerable literature on the relation between anxiety and academic performance, which is of interest to us because anxiety and neuroticism are highly correlated. Anxiety is a diffused irrational fear, it is not directed to an appropriate target and not controlled by self-insight, spreads through out the life and strains the individual social relationship. It puts the
individual on alert and predisposes him to see other person or group as menacing. There is a substantial body of evidence to suggest that development of such irrational depends on, how the individual interprets his experiences, and how he interprets the causes of his experiences. If the individual perceives the events, whether positive or negative, as being a consequence of his own actions and which are under his personal control than he is not likely to develop irrational fear or anxiety. If a person on the other hand perceives positive or negative events as being unrelated to his own behaviour rather attributes or vicissitudes of existence to fate, luck, behaviour of others or environmental factors, he is more likely to develop irrational fear or anxiety.

The first types of individuals are known as “internally oriented” individuals, while the later types of individuals are considered as the “externally oriented” individuals (Rotter, 1966). While developing the social learning theory (Rotter, 1966) coined the term internal-external locus of control.

There are substantial bodies of evidence to the effect that emotions of the individuals depend on the explanations they make about why they succeeded or failed. Weiner, Russell, and Lerman (1978, 1979) undertook a series of studies in which they cited the occasion when students had succeeded or failed on an examination for a particular reason, such as help from others, luck and lack of effort. These researchers found that the students’ emotions were more closely associated with their interpretation of their experiences.
rather than with the outcome of the examinations. Thus, Weiner, Russell, and Lerman (1978, 1979) observed that those who believed they did well because of their own effort and abilities tend to feel proud, competent, and satisfied, whereas those who blamed others for their failures tended to feel angry, hostile, or alarmed. Moreover, these researchers also found that those who believed they did well because of a lucky fluke or chance tended to feel gratitude, surprise or guilt and those who believe their failures were due to their own fault tended to feel regret, guilt and resignation. These findings portray clear picture of the characteristic behavioural pattern of internally oriented and externally oriented individuals. More specifically these findings make it crystal clear how internally and externally oriented persons interpret their experiences. The emotional reactions of these two types of individuals and their way of interpretations of the experiences, lead us to assume externally individuals are anxious, hostile, prone to dependence than internally oriented individuals. Such characteristics, in turn lead us to assume that externally oriented individuals are likely to show poorer academic performance than internally oriented individuals.

Reiser (1980) examined the differences in course of performance attitude of college students, identified by the Rotter’s Internal-External Locus of Control Scale as external and those identified as internals. An interaction was found between the types of reinforcement expected, type of pacing treatment, and course performance.
Cooper and Findley (1983) conducted a quantitative review of research investigating the relationship between locus of control and academic performance. Two basic conclusions resulted: (a) More internal beliefs are associated with greater academic performance, and (b) the magnitude of this relation is small to median. Characteristics of the participants in the reviewed studies (i.e., gender, age, race, and socio-economic level) and the nature of the locus of control and academic achievement measure were investigated as mediators of the relation. The relation tended to be stronger for adolescents than for adults or children. Also, the relation was more substantial among males than among females. Finally, stronger effects were associated with specific locus of control measures and with standardized achievement or intelligence tests.

A positive relation between locus of control beliefs and achievement is logical and intuitively appealing. Logically, if success is positively valued, people who feel more able to control outcome should exert more effort. Also, internals and externals should (and do) react differently to success and failure. Internals take pride in good outcomes and feel shame in bad outcomes, whereas externals experience less intense emotions (Phares, 1976). This difference should enhance the relative “attractiveness” of the success experiences for the internals.

In addition to logical appeal, a number of studies have associated internal locus of control beliefs with behaviors that affect the probability of
attaining success. For instance, DuCette and Wolk (1972) found that externals tend to exhibit less persistence at tasks.

DuCette and Wolk (1972) studied the relationship between locus of control and extreme behaviour in regard to risk taking, persistence, shifts in level of aspiration, and estimation of success. One hundred and seventy-three freshmen students from a girls’ suburban high school served as Ss. The data were collected in the two sessions separated by a period of one week. In all cases, the data were obtained at the end of a class period in which English had been the instructed material. In the first session, Ss were given the Internal-External Locus of Control Scale (Rotter, 1966). In the second session, Ss were given a questionnaire which was divided into two parts. The first part contained four questions relating to various aspects of future aspiration or risk taking. In the second part of the questionnaire, Ss were asked to respond to several questions involving an attempt to solve a puzzle. Since all of the dependent variables were treated as nominal data, an appropriate statistical technique is a chi-square relating extreme behaviour to locus of control. The dichotomy of internal versus external (again a nominal classification) is of interest, which in the present study was operationalized as a median split on the Internal-External Locus of Control Scale. Analysis of the data collected from 173 high school female Ss indicated that external Ss as opposed to internal Ss were characterized by a preference for extreme risks, low persistence, and atypical shifts in level of aspiration; they were more extreme in their estimation.
of success when responding to items related to academic, occupational, and cognitive activities.

Others have found a positive relation between internality and (a) willingness to delay rewards in order to maximize them (e.g., Bialer, 1961) and (b) preference to perform in skill rather than in chance situations (e.g., Rotter and Mulry, 1965). Each tendency means internals have a greater likelihood of achievement.

Bialer (1961) studied conceptualization of success and failure in mentally retarded and normal children, to set forth and to test a tentative formulation of success-failure conceptualization as measured by certain developmentally determined behavior patterns in retarded and normal children. The subjects were a combined group of 89 mentally retarded and normal children, of both sexes, ranging from 6-3 to 14-3 and in MA (Mental Age) from 3-10 to 15-9. The 45 retarded children were drawn from special classes for the educable mentally retarded in the city schools; the 44 normal Ss came from regular grades in the public schools. All Ss were given the following treatments, a verbally administered locus of control (LC), A Repetition Choice Situation (RC) and, a condition to determine the degree of the child’s commitment to either an intermediate or a delayed gratification patterns (GP). Thus, the data, consisting of five variables (MA, CA, LC, RC, And GP), were analyzed by multiple correlation and factor analysis. It was found that there was a significant tendency among the Ss (regardless of
retarded-normal classification): (a) to perceive internal locus of control, (b) to respond to success and failure cues rather than to hedonistic cues, and (c) to delay gratification when such delay led to the eventual attainment of a larger reward. MA, rather than CA, was found to be the more relevant variable related to the above aspects of the development of success-failure conceptualization. A factor analysis of the five variables resulted in the derivation of a general factor and of one group factor, which described the behaviour measures (LC, RC, and GP) as a separate age-independent dimension.

Rotter and Mulry (1965) investigated internal versus external control of reinforcement and decision time. The subjects included 61 females and 59 males. The subjects were obtained from the elementary psychology course at the Ohio State University. The subjects were randomly assigned to either chance or skill groups. Half received the I-E Control Scale before the experiment, and the other half after the experiment. Without scoring the tests in the case of the former group the subjects were assigned on an alternating basis to either the chance or the skill group and given the angle matching tests. Four groups of subjects were compared on a series of dependent variables. To obtain these groups subjects were divided into “internal” and “external” by splitting the groups at the median and then further subdividing on the basis of whether they were given chance or skill instructions. Results showed significant interaction between internal-external control and chance vs. skill instructions.

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As hypothesized, internal took longer with skill instructions, externals with chance instructions. The study extended the construct validity of the internal-external control. More specifically, it was found that individuals, who can be characterized as internals from scores on the I-E Control Scale, take longer to decide in a matching task when the task is defined as skill controlled than when it is defined as chance controlled. The opposite tendency is found with subjects who are classed as externals. Externals tend to take longer to decide on the correct match when the task is defined as chance than when it is defined as skill controlled. The interaction is highly significant both for a predominantly positive reinforcement sequence of training trials and for a series of continuously negative extinction trials. Internals under skill conditions are significantly different from internals under chance conditions, and internals under skill conditions are significantly different from externals under skill conditions. On the other hand, while externals differ under chance and skill conditions in the predicted direction, these groups are not significantly different. In other words, most of the difference is attributable to the longer time taken by internals under skill conditions.

**Prociuk and Breen (1974)** decided to use the multidimensional scales to examine the relationship between control and two academically related variables: Study habits/ Attitude and college academic performance. Subjects (89 Psychology Undergraduates) were administered the P and C Scales and a survey of study habits and attitudes. Their Grade Point Averages (GPA) was
used as a measure of academic performance. Results using correlational analysis supported the prediction that study habits and academic performance are related positively to perceived internal control and negatively to chance control.

Along with other variables considered relevant to academic performance, locus of control has received a considerable attention. While the first studies relating locus of control orientation to academic achievement were completed at Fels Institute (Crandall, Katkovsky and Preston, 1962), it was so called Coleman Report (Coleman, Campbell, Hobson, Mc Portland, Mood, Weinfeld, and York, 1966) that focused on locus of control orientation as a significant determinant of academic achievement. In the Coleman Report, a measure of internality was implicated as a highly important achievement predictor of academic achievement in both white and black children.

Bar-Tal and Bar-Zohar (1977) reviewed 36 studies reporting the relationship between individual locus of control beliefs and academic achievement. Of the studies, 31 reported a positive relationship between locus of control beliefs and achievement measures (at least for some of the measures and for some part of their samples); 4 found no relationship, and one reported a negative relationship. The authors explained this relationship by referring to cognitive and motivational differences in internals and externals. Specifically they suggested that internals showed greater persistence and effort in skill
situations and better use of tasks-relevant information lead to superior academic achievement.

In a similar vein, Ramanaiah, Ribich and Schmeck (1975) studied the academically related behaviors of internals and externals in order to understand the relationship between locus of control and academic achievement. They reported that internals as compared to externals had better study habits and positive educational attitudes.

Goyal (2000) examined the relationship between Locus of Control and academic achievement, and discussed the possibility of gender differences. Past research indicated a positive correlational relationship between internal scores and high academic achievement. Overall, the research regarding gender found males to be more internal than females. The 77 subjects from 10th grade American History students were placed in three different class levels, according to academic achievement the prior year. The Rotter's Internal-External scale was administered to all the subjects during History class. These scores were then separately correlated with academic class level and gender. The statistical analysis found a correlation between locus of control and academic achievement, with a Pearson Correlation Coefficient of .387. According to data collected, females were found to be more internal then males, however a level of significance was not found. Overall, Goyal (2000) supported the implications of past research because a significant, positive
correlation was found between internal locus of control and academic achievement.

Sisney et al., (2000) reported that locus of control has been associated with school success since the 1966 Coleman Report on Equality of Educational Opportunity was released. They added that studies with high school students have shown that an external locus of control correlated to lower academic achievement and higher dropout rates. Similarly, Ekstrom, Goertz, Pollack, and Rock (1986) concluded from their national study that high school dropouts exhibited more external control and were more likely than those who stayed in school to feel that their destiny was out of their hands. Finn and Rock (1997) asked whether self-esteem and locus of control explain differences between resilient (academically successful high school students) and non-resilient individuals within a group of low socio economic status (SES) minority students. They found that higher self-esteem and internal locus of control were both characteristics of low-SES minority students who succeed in high school. In this study, an internal locus of control was shown to be a determinant of success when other predictors of attrition such as ethnicity, non-traditional family structure, lack of parent education, and low income were present.

Carden, Bryant and Moss (2004) asked 114 undergraduate to complete the Internal- External Locus of Control Scale, the Procrastination Scale, and the Achievement Anxiety Test. They also provided a self-report of
their cumulative GPA. Students were divided into two groups by a median split of 10.5, yielding an internally oriented group of 57 and an externally oriented group of 57. The former students showed significantly lower academic procrastination debilitating test anxiety, and reported higher academic achievement from later.

The early work with locus of control construct focused on achievement behavior and was based on the premise that internals would show more efforts and persistence in attempting to achieve than externals because the later group would see no connection between their behavior and outcomes. However, studies designed to examine locus of control and academic performance and to use unidimensional measures have often produced nonsignificant or inconclusive results (Warehime, 1972).

Gifford, Brice-o-Perriott and Mianzo (2006) in a study of more than 3,000 first-year students assessed a traditional pre-college predictor, the ACT, along with a new potential pre-college predictor, locus of control, to determine their effectiveness in predicting first-year student academic achievement as measured by end-of-first-year cumulative GPA. The results indicated that first-year students who entered university with lower scores on the locus of control scale (internals) obtained significantly higher GPAs than those who scored higher (externals) on this same scale. Pre-college ACT scores also served as an effective predictor of student academic success as demonstrated by significantly higher cumulative GPAs at the end of the first year. In addition, it
was also found that first-year students retained to their sophomore year demonstrated a statistically higher GPA than those who were not retained.

Ashtiani, Ejei, Khodapanahi and Tarkhorani (2007) in a study surveyed some of personality characteristics of adolescents and their associations with academic achievement: According, 1314 randomly allocated students of Tehran's high schools were assessed by Beck self-concept inventory, Coopersmith self-esteem inventory, Spielberger State-Trait anxiety inventory, Beck depression inventory. Results indicated that self-concept was correlated with self-esteem and those two have positive impacts on augment of academic achievement. Moreover, the increase of self-concept and self-esteem were related to the decrease of anxiety and a negative significant relation found to be existed between self-concept, self-esteem and depression which will ensue decrease in academic achievement. They also quoted Wiest et. al., (1998), who observed that academic performance, is influenced by locus of control.

Kirkpatrick, Stant, Downes and Gaither (2008) examined the relationship between LOC and student success by presenting students with timed opportunities to name specific internal or external events that would engender their individual success. First, the authors revisited the relationship between grades and academic performance by measuring LOC, grades in general psychology, and overall grade point average (GPA). Then, they devised a task that would require students to name the actual events (their own
choices or external happenings) purported to exert causal control over academic outcomes. They hypothesized that skilled and discriminating students could easily identify behaviors in which they routinely engage, but would have difficulty making up answers that were not already in their repertoire. By timing the task, the authors aimed to diminish the influence of self-serving attributional bias. Finally, although not specifically spelled out, they integrated the LOC concept into a first-year psychology course to demonstrate its pedagogical value. In this manner, they have begun a process of integrating student development issues into the academic curriculum in a manner that might eventually facilitate academic success without compromising or detracting from curricular integrity.