REVIEW OF LITERATURE
CHAPTER-II

REVIEW OF LITERATURE

This chapter includes review of literature on three major variables included in the study (1) Academic self-concept, (2) Stress and (3) Academic performance. The fourth section contains a critical summary providing a rationale to this study.

2.1 ACADEMIC SELF-CONCEPT

That self-concept has been considered a critical variable in educational research is evidenced by the plethora of studies concerned with aspects of self-concept in different educational settings over diverse students groups: primary school (Lakey, 1977), intermediate school (Shavelson and Bolus, 1982), high school (Calsyn and Kenny, 1977), college (Bailey, 1971), the physically disabled (Rosher and Howell, 1978), the trainable mentally retarded (Nash and McQuistan, 1975), the educable mentally retarded (Calhoun and Elliott, 1977), the learning disabled (Smith, 1979), the gifted (Coleman and Fults, 1982), the disadvantaged (Soares and Soares, 1969; Zirkel 1971). To date, quite a few comprehensive reviews of the literature have been completed on substantive topics in self-concept theory (Purkey, 1970; West and Fish, 1973; Wylie, 1979; Zirkel, 1971), methodological issues in self-concept research (Shavelson, Hubner and Stanton, 1976; Shavelson and Stuart, 1981; Wylie, 1974), influence of self-concept on thought and action (Greenwald and
Pratkanis 1984; Higgins 1987; Markus and Wurf 1987; Rosenberg 1981; Wylie, 1974), intervention programmes for presumed self-concept change (Scheirer and Kraut, 1979), and the relationship between self and performance measures (Hansford and Hattie, 1982). There seems to be a critical need, however, for an overview of studies on self-concept construct with respect to its nomological network within educational framework.

The literature on self-concept in educational setting can be divided into two broad categories: within-network and between-network research. Within these divisions the studies can be further classified by the methodological procedures used. Many of the within network researches have investigated the relations between general self-concept and academic self-concept and/or whether it is possible to differentiate these facets from one another. ‘Between network’ researches included empirical studies examining the relationship between general self-concept and academic self-concept, and with academic achievement.

The earlier self-concept researches focused on general or global self-concept whereas recent researches emphasized the multi-dimensionality of self-concept (Shavelson, Hubner and Stanton, 1976; Soares and Soares, 1977; Boxersma and Chapman, 1979; Harter, 1982; Fleming and Courtney 1984; Byrne and Shavelson, 1986b). They have thus, identified academic self-concept as one specific dimension of self-concept. Researchers (Hansford and Hattie, 1982; Shavelson and Bolus, 1982; Marsh, 1986, 1987) have indicated that the academic self-concept
differed from the general self-concept and correlated highly with academic achievement and other academic behaviours. Initially, researchers conceived of academic self-concept as a unidimensional concept (e.g., Brookover, Paterson and Thomas, 1966; Harier, 1982). The departure was made by Shavelson, Hubner and Stanton (1976) however, when they posited a multifaceted, hierarchical model of self-concept, with perceptions of behaviour at the base, moving to inferences about the self in subareas (e.g., English, History) and then to inferences about the self in academic and non academic areas. This has found partial support in studies by Byrne (1982), Shavelson and Bolus (1982). The hierarchical model paralleled in many ways Vernon’s (1950) model of intelligence.

Academic self-concept represented a person’s relatively stable perceptions of own strengths and weakness, which were largely based on one’s history of success or disappointments in educational institutions. Academic self-concept thus related to socio-personal characteristics and academic performance.

2.1.1 Academic Self-concept and Social Categories

Hyman (1942) found pupils who were less able academically or were part of a lower status subgroup were likely to consider peers of higher academic or social status as their referent rather than the normative reference group (Kelly, 1952). In another study Wylie (1963) pointed out that negro children generally had lower self-estimates or levels of aspirations for their school work ability than the white children. Piers and
Harris (1964) studied black and white elementary school children and concluded that a significant positive relationship existed between academic self-concept and achievement of black and white children. They found no significant gender differences. Kvaraceus (1965) pointed out that the environmental pressure of the American social system was such that it tends to develop negative conception of self in negro children resulting in poor academic achievement of the negroes. Soares and Soares (1969) tested 299 disadvantaged and 285 non-disadvantaged students of elementary and secondary schools. They concluded that an individual's own estimate of his or her ability was related to academic achievement but there were no significant differences in the self-concept and academic achievement because of the socio-economic strata (Trowbridge, 1972). Caplin (1969) studied academic self-concept of 180 black and white children of intermediate grades in two elementary schools and found a significant positive relationship between academic self-concept and achievement of black and white children. Boys and girls did not differ significantly on academic self-concept.

Buck, Ford and Schulman (1973) found differences in the self-concept of ability of the negro and white students. Evans and Anderson (1973) in their study with Anglo-American and Mexican American junior high school students found that regardless of the amount of English spoken at home, Mexican American students exhibited lower levels of academic self-concept than their Anglo American peers, because of which concomitantly
they attained lower levels of academic achievements. Pugh (1976) used path analysis to estimate reciprocal relationships between academic self-concept and academic achievement of 724 black and white male students of senior high school. He concluded that among white students, academic self-concept and educational aspirations were significant determinants of academic achievement. The impact was minimal among blacks.

Renick and Harter (1989) found the learning disabled students perceiving themselves as less academically competent than normally achieving students. Significant differences between non scheduled caste and scheduled caste students on physical, social, intellectual and total self-concept had been reported by Panda (1991). When sex and caste interacted with each other, the differences in self-concept were not significant. Non scheduled caste and the boys had positive self-concept as compared to their counterparts. There were significant differences on academic achievement between non SC Vs SC and Male Vs Female students.

2.1.2 Academic Self-concept and Subject Stream

Astin (1962) reported that students developed relatively lower estimates of their own scholastic ability at colleges with high enrolment, having selective admission policy and where many students majored in practical and technical fields. In a study of changes in self-ratings of students in various institutions, Skager, Holland and Braskamp (1966) reported that students majoring in agriculture and engineering developed a relatively lower estimate of their own popularity than students elsewhere.
Students having their peers major in the arts, literature and languages showed more interest in attaining prominence in public affairs.

Cohen (1974) reported that students' choice of a curricula and performance in them were associated with their self-concept of ability. In an earlier study similar findings are reported by Narayan (1972). Gayathri (1979) in her study of 4th and 5th year students of B. Tech courses of I.I.T., Delhi and 1st and 2nd year university students of M.A in social sciences at a found the academic self-concept of students significantly related to their academic achievement, once the academic ability was controlled. Hoge, Smit and Hanson (1990) found grades more important for discipline-specific self-esteem than their global or academic self-esteem.

The above studies suggest that students entering different fields have certain distinctive self-perceptions.

2.1.3 Academic Self-concept and Gender

In an extensive research comprising three projects spanning over 6 years, Brookover and associates (Brookover, Paterson and Thomas, 1962; Brookover, Lepere, Hamachek, Thomas and Erickson, 1965; Brookover, Erickson and Joiner, 1967) tracked students of seventh grade through 12th grade and examined the relationship between students' academic self-concept and their academic achievement. They reported that self-concept of ability was significantly and positively related to academic achievement both
among boys and girls. Further, this relationship remained substantial, even after IQ was controlled. Calsyn and Kenny (1977) attempted to determine the direction of causal predominance of the self-concept of ability, perceived evaluations of others and academic achievement by reanalysing the data collected by Brookover et al (1962, 1965, 1967) over a 5 year period by using a cross-lagged panel design. Calsyn and Kenny found academic achievement as causally predominant over self-concept of ability in females than in males. It was less pronounced in the high socio-economic group. Contrary to the Brookover et al findings, both self-concept of ability and academic achievement were found to be causally predominant over perceived evaluations of others. Johnsen and Medley (1978) examined the academic self-concept of 189 black high school seniors attending a black urban school. They found no significant difference between males and females on academic self-concept. In a study of senior high school students from a nationwide sample, O'Malley and Bachman (1979) found similar relationships between self-perception and academic achievement for males and females (.28 and .29 respectively). In a partial replication and extension of an earlier study (Bachman and O'Malley, 1977), the investigators compared the relationship of self-concept and academic achievement for males studies, they found the relationship to be highly stable over an 8 year period (1969, .27; 1977, .28).

Ross and Parker (1980) did not find significant gender
differences in the academic or the social self-concept of intellectually gifted school students. Both gender students possessed significantly higher academic than social self-concepts. Meece, Parsons, Kaczala, Goff and Futterman (1982) reviewed studies on gender differences in mathematics achievement and mathematics self-concept. They reported very few and small differences between boys and girls in achievement as well as self-concept in elementary school, although females tended to have lower levels of achievement and self-concept in mathematics in high school. Several studies reviewed by Marsh (1989) indicated higher verbal and reading self-concepts for females than males. Marsh, Smith and Barnes (1985) found females having significantly higher achievement scores than males in reading as well as in maths. They had higher self-concept in reading and lower self-concept in maths than males. Academic achievement showed no correlation with self-concept, but correlated positively with academic self-concept.

An internal/external frame of reference model posited by Marsh (1986, 1988) to show that a high maths self-concept was more likely when maths skills were good relative to those having poor skills (an external comparison), and when maths skills are better than reading skills (an internal comparison). Results were found consistent with the model in that maths and reading achievements correlated with each other, although the two self-concepts were not related. The findings demonstrated different motivational influences on each academic self-concept facet.
distinctly. Marsh, Byrne and Shavelson (1988) explained self-concept in terms of sex stereotypes and differential sex role socialization patterns (e.g., Mece, Parsons, Kaczala, Goff and Futterman, 1982; Fennema and Peterson, 1985). Sex stereotypes directly influenced maths and verbal self-concept in addition to the effects via achievement. Marsh (1989) argued that differences in socialization patterns may fail to adequately reinforce boys' positive attitudes, expectations, self-concepts and performance in verbal areas and girls positive attitudes in mathematics. Gender differences in maths and verbal self-concepts were larger than could be explained by differences in objective achievement (Marsh, 1988). Marsh (1989) hypothesized a causal direction of differential socialization patterns leading to differences in maths and verbal self-concepts and in maths and verbal achievement. Marsh (1989) found gender differences in specific areas of self-concept generally consistent with sex stereotypes and relatively stable from pre adolescence to early adulthood. Some supportive evidence could be seen in earlier researches (Pallas and Alexander, 1983; Marsh, Smith and Barnes, 1985 and Marsh et al, 1988).

Skaalvik (1990) tested sixth-grade Norwegian females and males. It was found that females have a substantially higher level of achievement and success expectations than their male classmates in Norwegian and English tasks, and no gender differences in achievement or success expectations in mathematics or in general academic self-concept. Cornell (1990) found
academic self-concept of adolescent girls significantly related to their poor classroom status. Skaalvik and Rankin (1990) found structural differences in the self-concept of males and females. Maths and verbal self-concepts related differently to general academic self-concepts. No support was found for the internal/external model (Marsh, 1986). Marsh and Byrne (1991) reported masculinity and femininity as related to multiple dimensions of self-concept, with femininity contributing positively to those self-concept facets that were more stereo typically feminine. Srivastava and Srivastava (1991) found the males to be significantly better on general, mathematics and science self-concept of ability than the females. The self-concept of ability in Hindi and Social Studies showed no significant gender difference. Blatchford (1992) did a longitudinal study of children. They reported that at 7 year children tend to overestimate their attainment, but the self-assessment of same children at 11 years matched the objective measures of attainment. The relatively higher self-assessment of boys at 7 years in maths disappeared by the 11 years. At 11 years then gender differences and mathematics attainment were not positive. Academic self-assessments were found to be low when reference is made to classmates than to other children in general.

2.1.4 Academic Self-concept and Stress

The children's self-concept diminished under the stress of a failure situation (Gibby and Gibby, 1967). A number of researchers (e.g., Garmezy, 1981; Ford, 1982; Garmezy, Masten and
Tellegen, 1984; Masten, Morison and Pellegrini, 1985; Tinsley, Cardella and McEnroe, 1985 and Blechman, McEnroe, Cardella and Audette, 1986) have suggested that the level of competence may moderate the negative impact of child life stressors on subsequent child psychopathology. Tanaka and Westerman (1988) found the academic competencies to be distinct from those in the interpersonal domain and that the potential differences between these, buffered the children from stressors.

2.1.5 Academic Self-Concept and Academic Performance

Velkman (1939) showed that one's self-concept determined the level of aspiration. Roth (1959) found that college students, whose reading ability improved as a consequence of the course, showed positive self-concepts than those who didn't improve or those who dropped out of the course. Poor self-concept led to low confidence in mastering the environment and hence deficiency in school performance (McCandles, 1961). Brookover (1964) indicated that the academic self-concept predicted performance more accurately. He also reported a significant and positive relationship between academic self-concept and achievement.

Kubiniec (1970) investigated the relationship between self-perception and relative success of students in the first year of college. Her findings revealed general self-concept to be a good predictor of academic success in college. Bailey (1971) found that a student's academic self-concept played a crucial role in one's level of academic achievement. Kiefer (1975) argued that the pattern of success/failure and the accumulated experiences
affected an individual's self-concept. A longitudinal study of students from grades 2 through 8 revealed that successful achievement was antecedent to a positive academic self-concept and the relationship became stronger with prolonged success/failure. Bridgeman and Shipman (1978) conducted a longitudinal study on 404 children from predominantly low-income areas, to determine the relationship of measures of self-esteem and achievement motivation at preschool, kindergarten, and first grade to reading, mathematics and problem solving performance in the third grade. They found that self-esteem tended to be generally higher in the preschool and the first grade but there was greater variance seen in the third grade. In addition, self-esteem in third grade was found strongly related to concurrent achievement measures. These results led Bridgeman and Shipman to conclude that a student's academic self-concept developed as a reaction to, rather than as causal to one's academic achievement in school. Rogers, Smith and Coleman (1978) pointed out that the importance of academic achievement for self-concept was not for the absolute level of achievement, but for students' perceptions of their achievement compares with others. The relationship between academic achievement and self-concept was meaningful within the context of the social comparison group. Wylie (1979) found that students' self-perceptions of their academic ability were based on their school performance. Variables like academic motivation and effort affected school performance and academic self-concept independent of academic ability.
Marx and Winne (1980) examined the relationship between academic achievement and the academic, social and physical dimensions of self-concepts in grade 4 through 6 students. They found the non-academic facets (e.g., physical and social self-concept) inversely and the academic self-concept as positively related to academic achievement. Hansford and Hattie (1982) in metaanalysis found that school performance indicators were highly correlated to self-concept.

Shavelson and Bolus (1982) examined the assumptions of multifacet, hierarchical construct of self-concept and it's relation with academic achievement and found support. Academic achievement was moderately related to general self-concept and highly related to academic self-concept in the same academic content area. They found the reading achievement of grade 7 and 8 students highly correlated with self-concept in reading. Byrne (1982) found the academic self-concept of 9-12 grade students highly related to academic performance. Marsh, Smith, Barnes and Butler (1983) explored the preadolescent's self-concept in seven areas and found these significantly related to teacher ratings of their self-concepts in the same area. Academic ability was not related to self-concept in four non academic areas, highly correlated to the particular area of academic self-concept, and most logically related to the particular ability measure like reading achievement and reading self-concept. Marsh, Parker and Smith (1983) found a positive albeit low correlation between academic self-concept and reading achievement of 5th and 6th
grade students. They explained the unexpected low correlation due to the combined effect of the test difficulty, time limit of the test and low reading ability of the students in the study. Kelly and Colangelo (1984) compared the gifted and non-gifted youngsters on academic and social self-concepts. Results indicated the gifted students having higher academic and social self-concept as compared to the non-gifted agemates, and a relationship between academic ability and academic and social self-concept. Marsh and Parker (1984) found that ability and GPA were substantially related to academic self-concept and have low relation with global esteem.

Bachman and O'Malley (1986) observed that the dimension that really mattered for self-concept of ability was not actual ability as the actual ability, background, grades mattered for long range educational attainment. These findings differed sharply from those reported by Marsh and Parker (1984). Marsh (1987) investigated the Big-Fish-Little pond effect on academic self-concept (BFLPE) based on Marsh and Parker's study (1984). Results indicated that one's own academic self-concept was negatively related to the average performance of classmates. Academic self-concept had a direct effect on subsequent school performance beyond the effect of academic ability or prior school performance.

Marsh (1990) found better maths skills leading to higher maths self-concepts but lower english self-concepts, whereas better english skills led to higher english self-concepts and
lower maths self-concepts. Average school achievement negatively affected academic self-concept. The school context effects were content specific as schools' average maths achievements negatively affected only maths self-concept, and schools' average english achievement negatively affected only english self-concept. Marsh (1990) found that the prior academic self-concept influenced subsequent academic achievement, but the prior reported grades had no effect on subsequent measures of academic self-concept. Wilhite (1990) reported positive relationship between academic self-concept and course achievement. Eshel and Kurman (1990) found academic self-concept and accuracy of perceived ability significantly associated with academic achievement. Pupils having higher academic self-concept scored higher on intellectual ability and academic attainment, but not on further education, compared to the peers having lower academic self-concept. Kanoy (1990) reported the high achievers having higher internal locus of control, more cognitively complexity higher academic self-concept and higher confidence in their ability and effort than the low-achievers.

Boxel and Monks (1992) found academic self-concept related to actual academic achievement. Padhi (1992) noted the significant effects of creativity and classroom environment on academic self-concept and achievement of the students. Marsh (1992) extended the research on Marsh/Shavelson (1985) model of self-concept. He found that the components of academic self-concept were not well differentiated and that the relation
between academic self-concept and academic achievement was more content specific than previously assumed. House (1992) reported students' academic self-concept to be better predictors of persistence than the expectancies for success in college. Self-perceptions of mathematical ability were significantly associated with persistence of females but not males. Students' self-perceptions of their overall academic ability were significantly related to school withdrawal both for male and female students. House (1993) extended the earlier (1992) research by incorporating large number of academic self-concept items. The results indicated the multiple aspects of academic self-concept like student's self-ratings of their overall academic ability, drive to achieve, mathematical ability, writing ability and self-confidence in their intellectual ability was significantly related to students' school withdrawl status 4 years after the initial measurement of academic self-concept. The relationship between academic self-concept and school withdrawal was found stronger for males than for female students as evidenced by the better fit of the overall logistic regression equation when all the five academic self-concept items were included.

2.1.6 Academic Self-concept, Personal and Social Variables

Age has been found relevant in some researchers in academic self-concept like Newman (1984) examined children's achievement and self-perceptions of ability in mathematics across grades 2, 5 and 10 in a longitudinal study. Results showed that between grades 2 and 5 mathematics achievement was causally related to
self-ratings of ability. There was some evidence that between grades 5 and 10 the strength of this causal relationship diminished. Achievement and self-concept were not sensitive to the factor of age. Byrne and Shavelson (1986) concluded that the hierarchial structure weakened with increasing age, that is, the specific self-concepts became less related to each other as the child matured. Stipek and Daniels (1988) investigated academic competence and predicted future academic attainment of ethnically diverse fourth grade children. The results suggested that the developmental changes in children’s judgements about their competence were influenced by age and the classroom environment.

Marsh (1989) found a decline in the self-concept from early preadolescence to middle adolescence, and an increase through early adulthood. Marsh, Debus and Carvan (1991) reported results of a series of confirmatory factor analyses showing that children as young as kindergartners had clearly differentiated self-concepts, including academic self-concepts, and that these facets become increasingly differentiated as early as the first and second grades.

Socio-economic background of students had some relation to their academic self-concept. Marx and Winne (1975), in their investigation on low socio-economic status black fifth and sixth grade children, found that academic self-concept was negligibly related and social self-concept negatively related to achievement. Tripathi and Pande (1976) reported that the non-scheduled caste students of grade sixth, eighth and tenth in a
majority school (non-scheduled caste run) showed higher positive academic self-concept than the scheduled caste students in majority and minority school (scheduled caste run). The academic self-concept of the scheduled caste students was markedly low in the majority school than in the minority school. Klein and Eshel (1980) reported high SES pupils having more realistic academic self perceptions than children of lower SES origin who were more inclined to overestimate their actual attainment. Realistic self-concepts of ability tended to increase as a function of grade and SES level of the students in the school. Academic self-concept became a sophisticated device for preserving positive self assessment rather than a direct and objective presentation of actual academic performance.

2.2 STRESS

Deep seated stress, mental and physical exhaustion, depression and nervousness in the student community contribute to high rate of failure, and maladjustment. Many of the stress performance studies were experimental in nature. Also a number of studies included 'anxiety' and 'deprivation' in relation to academic performance, since the two were closely related to stress.

2.2.1 Stress and Social Categories

Deutsch (1960) found that the negro children generally were more passive, morose and fearful than their white school mates. He further pointed out that when the negro child was aggressive
it was usually in some covert manner. Rath (1974) found greater incidence of neuroticism and insecurity in the low caste students. Becker, Peter and Schneider (1976) pointed out that emotionally weak, less confident subjects showed higher stress and more defense mechanisms than stable subjects. Sharma (1978) showed that low class and deprived have a higher degree of anxiety. In a later study (1988) he confirmed these findings. Rao (1978) pointed out that the disadvantaged exhibited symptoms like anxiety, depression and were less interested in their academic pursuits. Panucci (1978) reported significant differences in anxiety associated with gender and ethnicity.

Mohanty (1980) reported that low deprived group had significantly low degree of anxiety (trait and state) as compared to the high deprived group (Tiwari, 1984 and Verma 1991). Singh (1981) observed that the disadvantaged students were more anxious, rigid, conforming, less extrovert, alienated and had a lower self image than their advantaged counterparts. Bhargava and Aurora (1981) found the highly deprived adolescents to be more reserved, emotionally unstable, depressive, conservative and frustrated, in contrast to the low deprived adolescents, who were more participating, intelligent, emotionally stable, radical and relaxed.

Some studies reported the scheduled caste/tribe or highly deprived groups having higher anxiety than nonscheduled caste, non-tribal or less deprived groups (Hassan, 1977; Misra and Tripathi 1978; Srivastava, Seth, Saxena and Mrinal, 1979; Singh,
1980; Rani, 1980 and Manwani, Srivastava, Saxena and Saxena, 1981). Self-image of the high anxiety students was found low, negative and rejecting (Hassan, 1977; Kureshi and Hussain, 1979), while some studies found these two personality variables unrelated (Passi and Sood, 1973; Verma, 1975; Shahi and Thakur, 1978; Gupta, 1982 and Sharma and Rao, 1983a, 1983b). Om Prakash (1983) found untouchables of B tech programme of Indian Institute of Technology having higher physical symptoms relating to anxiety, neurotic symptoms as well as emotional and personality conflict symptoms than the socially advantaged students.

2.2.2 Stress and Subject Stream

Science students exhibited more creative talent and low general anxiety than arts students (Misra, 1978). Gadgil (1979) reported the cases of failures in commerce due to inadequate grounding in the subject, inadequate motivation of students for study and inadequate guidance in answering the questions. The lowest stress score recorded in arts group were attributed to the nature of subject. Sharma (1982) found no significant difference between students of science and commerce on anxiety and study habits. Johan (1985) reported the over achievers in science as more emotionally stable as compared to the under achievers. Gupta (1987) found anxiety having a significant negative correlation with academic achievement of arts and science students. Thomas (1988) studied 212 Singaporean pre-university students and reported science students to be more stress prone than arts students. Das (1989) found commerce students having greater stress
than the science and arts. There was a significant difference in the stress scores of boys and girls of 10th but not in 12th class students and stress adversely affected performance of students. Puccio, Talbot and Joniak (1993) revealed that a course requiring adaptive behaviour was perceived as more stressful than a course requiring innovative behaviours. The lesser the originality demanded in the course the greater was the perceived stress. Stress was associated with the magnitude of the difference between what was required in the course and what students exhibited.

2.2.3 Gender Differences in Stress

There were few studies which highlighted gender differences in stress.

Verma (1961) reported that boys showed significantly more aggression, delinquency and non-compliance than girls. Julka (1963) found no significant difference between anxiety levels of boys and girls. Sharma (1970) investigated the nature of relationship between manifest anxiety and school achievement of 7000 Indian adolescents. Frankenhouser (1976) studied gender differences in psychoendocrine reactions to examination stress. She found that during the control condition, gender differences were nonsignificant. But during examination stress, the urinary, erection of cortisol adrenalin etc. increased in both sexes but to a greater extent in males. Both sexes performed well but self reports showed that feelings of success and confidence were common to males, whereas feelings of discontent and failure were
predominant among females. High discomfort correlated with poor performance in males and good performance in females. Heuser (1978) studied three differential forms of stress (manipulated-frustration, time pressure, and disapproval) by using the task of three rearrangement of number sequences. The sex of the 120 subjects and their susceptibility to anxiety were also considered. The main factors of stress and anxiety as well as the interaction of stress and sex proved to be statistically significant. Heliser (1978) found the interactive effect of stress and sex significant on problem solving task and several factors that could hamper the performance of female subjects under conditions of stress.

Raghwa (1980) noted that girls differed from boys significantly on anxiety and achievement. Girls scored significantly higher than boys on anxiety but boys scored significantly higher than girls in achievement. Dube, Sundaram, Mohan and Jain (1980) found gender differences, in the perception of stressful life events (Singh, Kaur and Kaur, 1981). Gastorf (1981) showed type A or type B personality patterns to be moderators of stress-anagrams performance relationship. Iorested (1981) argued that the sex role stereotypes might be more pronounced in high arousal states and the sex differences in anxiety levels may be due to structural complexity of situations. Jindal and Panda (1982) found the low achievers were more anxious than high achievers irrespective of gender. Chadda (1982) noted that stress affected performance of university students in an
attention task adversely. The effects of stress, and anxiety were independent of gender. Yamamoto and Davis (1982) reported older children experienced more upsetting life events and were more stressed. The Japanese boys were under more pressure than the girls. Pandey (1984) found that high deprived girls excelled on academic anxiety as compared to low deprived girls. Bisht (1984) pointed out that male students had less institutional stress than female students. In earlier study Dale (1969) reported similar findings. Mehrotra (1986) noted that the girls of class X had comparatively higher level of anxiety than the boys. Hamilton and Fagot (1988) reported no gender differences on daily stressors and concomitant perceptions of stress among 51 females and 39 males of first year undergraduates.

Kapil (1990) revealed significant difference in the pattern of tensions among undergraduate and post graduate males and females. Seipp (1991) in a meta-analysis of anxiety and academic performance studies reported stronger effect of anxiety on females because of an overgeneralization of findings. Grannis (1992) found the frequency of stressor events related to external locus of control, self reported distress and lower grade point average. Girls appraise stressor events as more upsetting than boys and received higher grade than boys, despite having comparable reading scores and the same locus of control. Prestridge and Soares (1992) examined stress levels of graduate students in a variety of disciplines over a three year period. The results revealed differences between males and females only
in intensity of stress and not type. Roberts and Monroe (1992) found no gender differences on academic stress. Grannis (1992) noted the frequency of stressor events as related to self-reported distress and lower grade point average of African-American students. Girls appraised stressor events as more upsetting than boys and received high grades. Budheu (1993) found no gender differences in anxiety levels of adolescents (age 16-18) in India and United States.

2.2.4 Stress and Academic Performance

Researches had been done on the effects of stress and the interaction effects of anxiety and stress on academic performance and complex learning tasks. The effects of manifest anxiety on the academic achievement of college students were examined by Spielberger (1962) to infer that anxious students in the middle range ability obtained lower grades and a higher percentage of academic failures than non anxious students of comparative ability. For the very superior students, however, they found that anxiety facilitated academic performance. Oetting (1966) studied physiological responses to examination anxiety and the performance of a group of male college freshman. He found stress occurring before the examination in some anxious students and during the examination for others and the anxious group had poor college grades. Results suggested that anxiety may have interfered with test taking but not with overall scholastic performance. Singh (1966) studied the effects of manifest anxiety on university examination and found negative relationships.
Sabberwal (1967) attempted to determine if tension distorted the behaviour and the work of pupils at the time of examination and to what extent the repressed and suppressed feelings discoloured their emotional maladjustment. Three groups (2 experimental groups of high and low tension and a control group) were formed. Results showed that due to the operation of tensions three groups differed widely in their performance. There was a negative correlation between tension and performance in the examination, that is, high tension produced low marks and absence of tensions resulted in high marks. Allison (1970) found no support for the hypothesis that high anxiety subjects would be more adversely affected by stress.

Dhami (1974) found a higher relationship between scholastic achievement and emotional stability in case of class IX than class X students who were more anxiety ridden due to the coming public examination. Bacon (1974) interpreted stress in terms of threat or shock. The activity which suffered most from stress was the one which got less attentional priority in instruction and was carried out less efficiently. Peter and Schneider (1976) revealed that emotionally liable subjects showed more symptomatic reactions and defense mechanisms than the stable subjects. The coping strategies used by the controlled subjects were significantly different from the strategies of impulsive students. Ravinder (1977) showed that low anxiety subjects under ego stress performed better than high anxiety subjects in the early stages of learning on easy and difficult paired associates
tasks. However in the later stages, high anxiety subjects performed slightly better than the low anxiety counterparts. Natarajan (1976) used four intensities of shock to create four different levels of fear in high and low anxious subjects and concluded that the amount of fear arousal for the same intensity of threat stimulus was determined by the anxiety state. Natarajan (1977) reported the state of effort stress was similar to the state of anxiety or fear with respect to the arousal component. Naidu and Thapa (1978) found that stressed subjects made more errors in distance judgements, and the errors caused by stress increased as the distance judged increased objectively. Bhattacharya and Bhattacharya (1978) reported that in perceptual tasks, stress led to significant increase in performance as compared to the non-stress conditions, but in conceptual tasks stress decreased the performance. The findings implied that the effects of stress may vary with the nature of the learning task. Paul (1978) determined the impact of a familiar stress situation on commonality of verbal association. Three groups of 32 college students responded to a word association test under the following three conditions. (1) under examination stress and then in a normal classroom setting, (2) in the reverse order, (3) twice under normal conditions. It was concluded that loose verbal associations in mild form would be the typical reactions to stress in normal persons. Deffenbacher (1978) suggested that the highly anxious individuals were more susceptible to distraction from task produced competing responses under conditions of high stress. In another study Deffenbacher (1978) examined the worry
and emotionality aspects of test anxiety in relation to evaluative stress on anagrams task of high difficulty level. It was observed that the evaluative stress elicited interfering anxiety in the form of attention to worrisome thoughts and ruminations, physiological arousal and upset and elements of task irrelevance. Sarason and Stroops (1978) offered evidence that highly test anxious persons under stress experienced cognitive interference and pre-occupation that made time pass slowly, resulting in poor performance. Bhagat (1979) found that stress affected performance negatively on the selective attention task. Ansari, Sampurna, Udupa and Agarwal (1979) revealed that persons with stress disorders had a high level of stress and anxiety as well as stronger achievement motives than controls. Speilberger (1979) found stress and anxiety often used interchangeably.

Murphy (1980) found no significant interaction effects of stress and anxiety on performance. Murphy (1980) concluded that stress influenced listening comprehension. Srivastava (1980) in a study on examination anxiety and academic achievement observed a negative relationship between the two variables. Contractor (1981) also found a significant correlation between examination marks and anxiety. Infact he demonstrated that anxiety contributed significantly to educational attainment. In another study, Nisha (1981) found stress having significant effect on performance in a selective attention task among normal and moderately neurotic subjects. Butler (1981) found stress and anxiety contributing to dysfunctional and pathological states in
human organism including performance. Siddique and Akhtar (1982) in their study on anxiety related to academic achievement among high school students demonstrated an inverse relationship between anxiety and achievement i.e., highly anxious students showed poor performance and less anxious students showed higher academic performance. Harris (1982) found stress and performance having a negative relationship. Mills (1982, 1983) felt that perhaps in a group of individuals whose anxiety levels prevented them from controlling their worrisome thoughts (experienced during performance of task) that performance was impaired. Srivastava and Naidu (1982) studied the relationship between stress and performance in high and low impulsive control subjects and found an inverse U-type relationship for high as well as low impulse control subjects. However, the high impulse control subjects did not show deterioration due to increase in degree of stress. Sud (1983) reported poorer performance of high test anxious and high stress group in comparison to high test anxious-low stress, low test anxious-low stress groups. The evaluative stress aggravated the detrimental effects of high test anxiety on anagrams learning of moderate difficulty. Abrol (1983) investigated the effects of stress and anxiety on psychomotor performance of 40 high and low anxious undergraduates on a psychomotor test both under stress and non stress conditions. Stress adversely affected the performance of both groups of subjects. Munshi (1983) did not find any effect of stress on the performance of subjects on selective attention task. However her findings showed a significant increase in the energy cost of work under conditions
of stress. Barnes, Vallria and Earett (1983) found that the interpersonal stress generated by competing demands for attention led to decreased power of intellectual ability. The stress arising from relations with parents and faculty reduced academic performance. Nathawat and Tiwari (1983) found a consistent tendency among persons with stress disorders to display a high degree of neuroticism, criticism of others, intrapunitiveness and hopelessness. Singh, Nigam and Singh (1984), in their study on neuroticism and academic achievement, found that high achievers were likely to be more anxious than low achievers. Eckenrode (1984) found everyday stressors influencing health and psychological well-being. Dolongis, Coyne, Dakof, Folkman and Lazarus, (1982); Kanner, Coyne, Schaefer and Lazrus (1981) and Davis (1985) used pre examination (stress) and post examination conditions to investigate the biological indicators of stress in 18 low anxious and 21 high anxious undergraduates selected on the basis of their scores on the Trait Anxiety Scale of the State Trait Anxiety Inventory and found parental support. The cognitive model of test anxiety had also been supported by Minor, Scolt, Gold and Steven (1986). They investigated the stability of the internal dialogue and self reported arousal in 98 test anxious psychology undergraduates during an actual college examination and again one week later. Findings showed that high test anxious subjects had more negative thoughts and reported more arousal during an examination than less test anxious subjects; negative thoughts and self reported arousal were consistent across time, while positive thoughts were unstable. Patel (1986) reported no
relationship between anxiety, neuroticism and academic achievement of medical college students. Ranganathan (1987) found stress and academic achievement of primary school children negatively related.

Macan, Shahani, Dipboye and Phillips (1990) found somatic tension negatively related to grade point average of undergraduate students. Smith, Smoll and Ptacek (1990) revealed that stressful life events had a variety of negative physical and psychological outcomes (Dohrenwend and Dohrenwend, 1981; Johnson, 1986 and Cohen, 1988). Das Gupta (1992) in his study of students in an introductory psychology class found the perceived control group experiencing less number of stress symptoms than the no control group. Neither student's age nor sex had any significant relationship with the symptoms reported and test performance. Biggs (1992) noted negative effects of stress on students' social adaptation, personal development and academic attainment (Spaulding and Flack, 1976; Church, 1982 and Altbach, Kelly and Lulat, 1985). Felsten and Wilcox (1992) reported that stress was directly related to increased symptomatology and decreased grade point average of college men.

2.2.5 Stress, Personal and Social Variables

Comparative studies on anxiety level showed older students to be more anxiety prone (Krishna, 1972; Ghosh and Singhal, 1973; Srivastava and Sinha, 1974 and Satyarthi, 1979). Spirito (1991) reported same stressors across age and sex; although the coping strategies employed differed by age and type of the
problem Price and Hooijberg (1992) found gender to be a significant predictor of anxiety and age of depression. Dube (1970) and Thacore, Gupta and Suriya (1971) concluded that the joint family system produced a greater amount of stress. Nijhawan (1972) found rural children having higher anxiety (general and test) than their urban counterparts in the upper class only, and the differences to be greater for girls than boys (Ansari and Krishna, 1974; Chatterjee, Mukerjee, Chakraborty and Hassan, 1976). Verghese, Beig, Senseman, Rao and Benjamin (1973) and Sethi, Gupta, Mahendu and Kumari (1974) noted the nuclear family to be more stress generating for individuals. Socio-economic status, caste status and parental occupation were not found related to anxiety (Ghosh and Singhal, 1973; Singh and Singh, 1973). In another group of studies however a negative relationship was reported (Sharma, 1971; Nijhawan, 1972; Srivastava and Sinha, 1974; Singh and Kaur, 1976; Srivastava and Sinha, 1974; Singh and Kaur, 1976; Sandep, 1977 and Hassan, 1978). Evans, Palsane and D'Souza (1983) reported the role of the Indian joint family as directly affecting the amount of stress experienced and buffering between daily hassles and health. Gunthey and Sinha (1973) and Singh (1985) found students having low socio-economic background to be more anxious.

2.3 ACADEMIC PERFORMANCE

Researches focused on the factor of scholastic achievement of students, from different angles although the findings have been equivocal regarding the causal factors.
Summerskill (1962) observed that institutional characteristics and values contribute to students' achievement. He concluded that achievement problems involved students' failure to meet the psychological, sociological or economic demands as well as the academic demands of the college environment. Coleman et.al. (1966) pointed out that a student's achievement was related to various possible explanatory factors in the school and one's own characteristics, as well as to factors like home background, family interest, parent's educational level, parents' income, aspirations, motivations, self-concept, sense of control over the environment, attitudes that support education and so on (Miller, 1970). Quite frequently it was seen that the students from culturally disadvantaged background lagged behind the rest in academic achievement. The culturally deprived children did not compete successfully with children from middle class homes. Their poor academic performance was attributed to actors in their environment.

2.3.1 Academic Performance and Social Categories

According to Deutsch (1960) poor academic performance of the socially disadvantaged children was the cumulative result of a large number of interfering, obstructing and handicapping factors in their personality, homes, schools and the society. The longitudinal study by Shaw and McCuen (1960) indicated that initial under achievers slipped further in school performance from the 1st to 12th grades. Comparing the school achievement levels of negro and white children, Dreger and Miller (1960)
reported a generally lower level of achievement among negroes. Rao (1963) observed that academic achievement was a very important value cherished by the middle class. This did not engage the attention of the lower class parents as they had insufficient time and a minimum orientation in that direction. Schreiber (1964) pointed out that children from the disadvantaged families had learning skills quite different from those required in the school. The trauma experienced by some of these children when they were first made to sit down and listen in the classroom was one from which many of them perhaps never recovered. Torrance (1965) found that discontinuity occurred for all children the first time they came to school, but this was most severe for children from the disadvantaged backgrounds. These discontinuities doubtlessly played an important role in the increasing rejection of school, adversely affecting scholastic achievement. Ausubel (1967) explained that once the children were out of step with their contemporaries they tended to lag behind. Gupta (1968) reported no relationship between achievement and caste, whereas in another study Ahluwalia and Gupta (1968) reported that high achievers belonged to higher castes. Miller (1968) identified four major classes of variables namely-cognitive, motivational, personal style and physical on which disadvantaged children showed deficits in school performance when compared to children from the other groups. Lessing (1969) noted that negro children had lower levels of academic achievement than whites. Negro children's intellectual and psychological handicaps interacted with each other and this increased the deficits.
Purcell and Hillson (1969) pointed out that the nature of socialization process of the culturally disadvantaged children was such that the disadvantaged children in all probability failed to achieve the academic standards.

Indian Council of Social Science Research sponsored several studies on the SC/ST students in 1972-73. The data from ICSSR surveys indicated that for a majority of students financial conditions at home were difficult and parental level of education was low. Taking the survey as a whole, 48.7% of fathers were rural based. Majority of the fathers were class IV employees in various government organizations. Similarly, in the village, the fathers were likely to be agricultural labourers, marginal farmers in traditional caste occupations. Both students and teachers indicated that home environment was not attained to achievement. The students complained of inadequate time for study, the burden of domestic chores and need for tuition. The teachers felt that rather than any basic lack of intelligence, these students have been unable to adjust to the values of higher education because of non-academic familial reasons.

Rath (1974) stated that the disadvantaged pupils exhibited three general characteristics during their school, like, 1. progressive decline in intellectual functioning, 2. acumulative academic achievement deficit, and; 3. premature school termination or higher dropout rates. Rajgopalan’s (1974) study on scheduled caste and scheduled tribe students of Karnataka indicated that (1) economic conditions of SC/ST were
uncomfortable, (2) most of the students needed private tutions, (3) home encouragement from parents was little, (4) influence of mass media seemed to be very little, (5) SC students had favourable opinion of the scholarship scheme and educational facilities provided to them, (6) the amount of scholarship was not adequate, (7) although there was some improvement in their status, it continued to be inferior and (8) more SC girls come forward for education than the ST girls. Rath and Misra (1974) found that (1) most SC/ST students continuing college education were the first generation getting this facility, (2) the scheduled caste students were self-dependent in taking decisions about marriage and future career, (3) they did not feel neglected either by teacher or by other students, (4) the scheduled tribe students usually had poor economic and educational background and (5) the scheduled tribe students understood their teachers less than the SCs and feel discriminated against them. Chitnis (1974) found the STs better represented both in schools as well as in jobs than the SCs. Premi (1975) also noted the economic poverty affecting the development of educational growth in SC/ST. A systematic study on the performance of SC/ST students in academic institutions was conducted by the University Grant Commission in 15 Indian universities for the academic year 1965-66. The picture that emerged was of low achievement and a high rate of dropouts (Karlekar, 1975). The main reasons for leaving were economic pressures and the need to work to supplement the family income. Sharma (1975) also attributed low achievement of SC/ST group to social and economic handicaps which put them in
disadvantaged positions. Premi (1975) pointed out that the rural life and lack of proper motivation besides economic poverty were the main factors hampering the development of education among the SC/ST groups. Many SC/ST students who continued higher education did not get jobs in accordance to their expectations. Their consequent frustrations acted as deterrents to the availing of higher educational facilities by other. Kirpal (1976) noted that while a reasonably large number of SC/ST students were admitted to schools every year, the number of students who completed high school was very small. Therefore, the enrolment of these students into the institutions of higher education was inadequate in spite of the policy of reservation. In another study Kirpal (1976) pointed out that many communities were unable to avail the facilities offered by the government as their priorities were different. Singh (1976) noted a relationship between academic achievement and social strata, time devoted to studies, economic condition and educational aspirations. Kirpal (1976) reported that there was no climate of education in most SC/ST families. Kirpal (1976) pointed out that in comparison with other students in IIT, the economic level of SC/ST was low, so most of them continued to exist on campus as a distinct community different from others in many ways. Feelings of loneliness and alienation came from another facet that they entered through reserved seats. Similarly Chauhan and Narayana (1976) noted that many of the students had no opportunity of taking guidance or getting encouragement from family members who were mostly illiterate. Rath (1976) noted that the hostile climate of the school
compelled socially disadvantaged children to dropout of school. Supportive climate of the school on the other was found conducive for the development of positive academic self-concept, low degree of fear of failure, realistic level of aspiration and high need for achievement (Pande and Tripathi, 1982). Panda (1977) showed that the scholastic achievement of disadvantaged was lower as compared to the advantaged. Singh (1977) reported that differences in scholastic achievement and intelligence between the socially disadvantaged and the socially advantaged groups increased with increase in the degree of social disadvantage.

Ushasree (1980) observed that socially disadvantaged children had low academic adjustment. Students who were able to improve their academic adjustment, were also able to improve their academic performance. Pushpa (1980) noted correlations between deficiencies in parental, physical and cultural environments and cognitive development. Jacob and Aikara (1980) found that despite a significantly higher enrolment among SC/STs in schools and colleges, they suffered from various social psychological complexes or inferiorities after they complete their higher education. Singh (1980a, 1983b) obtained the academic attainment curves for the socially disadvantaged and advantaged groups which shaped like a broom stick. They were narrow to begin with but widened in favour of the socially advantaged students with each grade. Dash (1984) found that SC and ST students have inferior cognitive, perceptual and linguistic abilities and thus poor performance in school. Verma
(1985) reported that achievement of high school scheduled caste students was significantly lower than the tribal students and students of other castes. However, there was no significant difference in the achievement of ST and those belonging to other castes. Patel (1987) noted that SC, ST and the advantaged secondary school students of Orissa differed significantly in their achievement in academic subjects, self-concept, teacher estimation and competence.

Tripathy (1990) found the academic achievement of tribal and non-tribal children in integrated schools comparable. Mohanty (1991) showed that tribal and non tribal students did not differ on psychological differentiation indicating equal potentiality of cognitive development in both groups but non tribal students showed better academic performance than their tribal counterparts. Better academic achievement of post graduate females belonging to upper caste with urban residence and high income was noted by Ojha (1991).

2.3.2 Academic Performance and Subject Stream

Chickering (1969) mentioned that the impact of class, course or curriculum depended upon the characteristics of the person encountering it. In another study Chickering (1969) emphasized the role students played in their own education, through their views and opinions leading to effective performance. The importance of the education type opted by students, wielded influence on student performance and satisfaction. Arunajati (1971) found that the nature of curriculum and subjects offered
by students influenced their achievement scores. Mishra (1978) found that intelligence and creativity were significantly correlated amongst the high achievers in science and commerce. He also found science students were relatively more creative, intelligent and low in anxiety than their counterparts in other streams. The arts students were low in creativity and in intelligence but high in anxiety. Vernal (1979) reported that students in a liberal arts curriculum (including social science, natural science and humanities) were more likely to express their general orientation to college, and to specify reasons for attending college in terms of getting a basic education, developing an appreciation of ideas, and developing the ability to think critically and make rational judgements different from students in engineering etc.

Gayathri (1982) pointed out that students from the science courses expressed a stronger exploratory orientation than arts students. Students in science and arts curricula perceived their environment as having similar qualities although the courses differed. Kumar (1986) found that the undergraduate students (280 in arts, 250 in biology and 200 in mathematics) showed academic attainment of an average level.

2.3.3 Gender Differences in Academic Performance

Conflicting results appeared about gender differences in academic achievement. Many studies revealed females to be better achievers than males in schools and colleges (Terman and Tayler, 1954; Gowan, 1955; Jackson, 1955; Summerskill and Darling, 1955;
Yates and Pidgeon, 1957; Chapman, 1959; Duff and Siegel, 1960; Waetjen, 1962 and Philips, 1962). Females tended to utilize their abilities more effectively than males. Males put less time in their studies because of various distractions. In addition, they were less docile and less tolerant to uninteresting lessons. Gender was not found important by Swensen (1957) Hountras (1957) and Holowinsky (1961). Drews (1961) reported that most of the talented high school graduates who failed to go to college were females. Those who found females to be low achievers explained it by saying that females were less serious students (Davies, 1963 and Nichols and Davis, 1964).

Kolesnik (1970) stated that girls regularly surpassed boys in scholastic achievement both at elementary and high school level. To him the difference between the academic achievement of girls and boys could not be explained in terms of general intelligence. The difference could be attributed to differential aptitudes, normal developmental sex differences and other factors which ordinarily worked to the advantage of the girls. Klausmeier and Ripple (1971) found girls to surpass boys in achievement in mathematics, language and handwriting and concluded that such differences were significant for education. Halpin et. al. (1973) noted that females maintained a high grade point average (GPA) in high school and male subjects maintained a high grade point average at college level. Sharma (1976) reported the girls to be significantly superior to boys in general science and mathematics.
Aruna (1981) and Bisht (1984) demonstrated that the males performed better than the females in academic achievement. Oakland and Stern (1989) conducted a study on variables associated with reading and maths achievement among a heterogeneous group of students. They reported that discrepant achievement was not unique to a particular race, level of intelligence, gender, age and family size. Tripathy (1990) found males to be better achievers than females. Mohanty (1991) reported no significant gender differences either on psychological differentiation or on academic achievement.

2.3.4 Academic Performance, Personal and Social Variables

Age of students has been an important variable with conflicting results. Dwyer (1939) found negative relationship between age and academic performance up to 21 years and positive trend beyond that. Negative associations between age and achievement were found by (Carter, 1953; Chapmen, 1959; Jamuar, 1963 and Gupta, 1966). Several others found age not related to scholastic performance (Dowd, 1952; Hountras, 1957; Diener, 1960; Raina, 1967 and Gupta, 1968). Choppin (1969) reported positive relationship between age and achievement.

Bisht (1984) found no age differences in academic achievement. Sinha, Trivedi Gupta and Sinha (1988) found that science undergraduate high achievers significantly of lower age group as compared to lower achievers. High achievers came from smaller families and from upper socio-economic class than the low achievers (Panda, 1991).
The impact of socio-economic disadvantage on academic achievement has been the focus of a large number of studies. Hammond (1957), on the basis of a study of students from different disciplines concluded that even where intellectual training and attainments were equalized (at entry), the students with better social and cultural background performed better than their counterparts. Bledsoe (1959) found that parents having between one and three years of high school education, who graduated from high school, or who attended one or more years of college respectively, have proportionately more children who graduated from high school. Parents with only four to six years of schooling have the largest percentage of offsprings dropping out of school. Malleson (1959) found that social class grouping had very little influence on the failure rate and academic performance of students in arts, science, law, engineering, political science and economics. Of the students in the highest social class, 35% failed to graduate compared to only 10% from the next lower social class. Rowlands (1961) reported that the cultural level of the homes of secondary school boys was much more closely related than economic level to the tendency of boys to enter the university. Schonell (1963) found that for these students problems of adjustment in both academic and social sphere may be greater particularly as parents attitudes were not supportive. Parents of disadvantaged youth also found it difficult to prepare their children to compete at school with other students who come from a different background. Astin (1964) noted highly significant relationship between the tendency to
dropout of college and lower parents' educational level. Bennur (1966) reported a positive relationship between socio-economic-status and achievement for students coming from both rural and urban high schools (Chopra, 1966). Sinha (1966) found that low achieving Indian undergraduates had less well educated parents than those who graduated. Coleman et al., (1966) pointed out that in the educational institutions the environment provided by the student body was different for the students from disadvantaged group and it affected the academic achievement of these students negatively. Bronfenbrenner (1967) noted that the scar of slavery which the Negro child had, determined their poor academic achievement. Curle (1969) showed that the school dropout rate for the poor was very high. The financial circumstances of the home was crucial for being able to continue with the studies.

Milner (1970) concluded that the breadth and quantity of early learning experiences, the type of adult models available to children for patterning their own behaviour, the amount and quality of health care and nutrition, the amount of opportunity for intellectual stimulation, the kind of behaviour toward the child, or the youth, etc., were some of the dynamic factors that predicted achievement. He pointed out that what mattered was not the social class from which the person originated, but the characteristics of the person and the social environment which influenced one's attainment. Therefore, while studying social factors affecting academic performance, one must look beyond social class to interests and values. Sharma et al (1974)
reported that the lack of appropriate linguistic capacity, conceptual awareness and general educational exposure resulting from individual and family experiences and the economic and social background of students accounted for the different achievement of the SC/ST students. Saini (1977) noted that along with economic status the educational standard of parents had a significant effect on the academic achievement of students in arts courses, for the science students economic status had no effect, the educational standard of parent was significantly related to performance.

Srivastava et al (1980) reported that lower SES background students had higher examination anxiety and poorer performance as compared to students of higher SES background. Subrahmanyan’s (1981) study highlighted the importance of conditions at school. Multiple regression analysis of the data showed that personal characteristics of the children contributed to a large extent to their reading achievement. Between the two factors, of school and home condition, an improvement in school condition was likely to lead to better achievement. In another study, Rao and Subrahmanyan (1982) reported similar results. Chatterjee (1982) reviewed studies to show that the relationship between SES and various achievement variables was not necessarily linear. Krishnamacharlu (1989) studied the impact of socio-economic and occupational status of parents on scholastic achievement of their children. He reported that so far as the social status was concerned, children belonging to forward communities secured
better percentage of marks than the children belonging to SC and ST communities.

Educational institutions are known to vary in structure, composition, resources, climate and hence achievement Coleman et al., (1966) reported the low quality school environment affecting the achievement of the disadvantaged much more adversely as compared to the advantaged. Achievement was strongly related to the educational background and aspirations of students in the school. The principal way in which the school environment of low middle SES children differed was in terms of the composition of the student bodies. The school environment had a strong correlation with the achievement of low SES student. Mortain (1973) showed that undergraduates at dissimilar institutions have noticeable variations in their profiles of orientation. This was expected as colleges and universities differed in terms of size, admission criteria and ethos. Variations were also noticed within the institutions. Sinha (1977) observed in a comparative study of scheduled caste and non scheduled caste students from superior and ordinary schools that higher caste status was associated with better performance on perceptual measure and better schooling. Irrespective of the caste, children from superior schools scored significantly higher than their counterparts in ordinary schools. Rao (1978) examined the academic performance of students in different types of schools, namely, those run by missionary agencies, corporation of Madras, government of Tamilnadu and separate schools for boys and girls. Private management schools
and girls' schools showed higher academic performance. Desai (1979) and Hirunval (1980) found a positive relationship between institutional characteristics and academic achievement of pupils.

Sinha (1980) revealed that despite lesser facilities and comparatively higher work load, the private schools were better in modes of teaching, interpersonal relationships within the school and had more competent students than the government schools. Pande and Tripathi (1982) found that the academic motivation of SC students became poorer with each grade level if they studied in non scheduled caste run schools, in comparison to scheduled caste students studying in SC schools. Gayathri (1983) revealed that schooling in public and central schools provided a background of experiences more suited to the study of exploration of ideas and knowledge than the private/convent schools. Veeraraghavan (1985), Sengupta and Veeraraghavan (1985) found the type of schools related to students' academic performance. Students from public schools showed significantly higher academic performance than those from missionary, municipal corporation and state government schools. Carpenter (1985) noted that students in government schools were more likely to achieve higher than those at the non government schools. Veeraraghvan and Bhattacharya (1989) observed that public and missionary schools had the highest achievement and government schools the lowest achievement, but in an earlier study Veeraraghavan and Samal (1988) did not find any significant effect of school type on students' achievement. Mohanty (1991) reported that students in
non tribal schools had better academic achievement than in tribal and mixed schools.

Academic achievement was found inversely related to family size (Criffts, 1926 and Londis, 1954). Dyer (1945), Myers (1952) and Watson (1965) reported no relationship, whereas Weitz and Wilkinson (1957) reported relationship between number of siblings and achievement. Students' characteristics and performance are influenced by family structure, socio-economic status, previous experiences, values and motives (Choptra, 1966; Summerskill, 1968; Brown, 1968 and Bennur 1973).

Nair (1981) reported that the under achievement of students of class 9th to 12th was significantly more, when father's occupation, income mother's education and caste were low and the family size was large (Raj and Krishna, 1980 and Contractor, 1981). Shukla (1984) noted that there were no significant sex, rural-urban differences in the academic achievement of primary school children. There was a tendency of better achievement among children belonging to the small family size. The structure of family (joint or unitary) had no significant differential impact on academic achievement.

Students from small towns often claimed that their failure was related to emotional problems of being away from home for the first time. Others thought that social distractions and development of new interests limited their academic achievement. Sharma (1966) found that rural students on an average got 5 or
more marks less in every subject than their urban counterpart. Miller (1970) cited studies to indicate that the size of family and place of residence had little correlation with academic achievement. Chatterjee (1977) found few differences in achievement and cognitive development of children varying in sex, rural-urban background and good school-poor school climate. But when they reached 5th grade there were significant differences in favour of boys, of those from urban backgrounds and studying in better schools on achievement and cognitive ability. Patel (1977) showed that pupils of urban area were high achievers. Urban boys and girls did not differ significantly in their achievement. Rural girls were superior to rural boys in all the tests. Goswami (1978) reported that the self-concept of urban and rural secondary school students did not differ significantly. Singh (1983) revealed that urban higher secondary school students had better academic achievement than rural students, whereas, they were at par in self-concept. Misra (1986) found that academic achievement of the rural secondary school students were lower than the achievement of the urban students. The academic performance of girls was superior to the performance of boys. Raghava Kumari (1986) concluded that the non SC/ST secondary students had better academic achievement than SC/ST students in rural and urban areas. In government and private schools the non SC/ST students had better academic performance than SC students. Raina (1992) reported that rural non SC/ST high school students had better academic performance than rural SC/ST students. In co-curricular activities SC/ST excelled the general pupils.
2.4 OVERALL SUMMARY AND PURPOSE OF THE STUDY

The above review indicated that academic performance was influenced by many personal, environmental and institutional factors. Studies were needed to investigate the complex interactive relationships among personal and environmental characteristics and academic performance of the students from various social groups in higher education. The academic self-concept, stress and various personal and social variables remain important determinants of academic performance and educational development, but researches reveal a number of significant gaps, which provide a base to the present study.

GAPS

Some of the gaps are noted below:

1. Comparative studies have not taken into account the difference between disadvantaged students and advantaged students in their academic self-concept, stress and academic performance.

2. Studies have not focused on gender and stream differences in academic self-concept, stress and academic performance of undergraduates.

3. The interaction effects of social categories (SC, ST and general), subject stream (Arts, Science) and gender on academic self-concept, stress and academic performance had not been researched.
4. The relationship of academic self-concept, stress and academic performance with institution types, socio-economic status, family size, family type, place of residence and place of schooling have been few and restricted.

5. The researches on causal relationship of academic self-concept, stress and various socio-personal variables on academic performance are scant.

6. It is felt that an integrated research into the complex and important aspects of student behaviour is lacking. The present study, therefore, proposes to investigate these issues in a systematic manner.