CHAPTER – II
REVIEW OF RELATED LITERATURE

INTRODUCTION

Review of related literature is one of the major steps in any research study. It allows the researcher to acquaint himself/herself with current knowledge in the field or area in which he/she is going to conduct his/her research. John W. Best (1995) pointed out that review of related literature is “A brief summary of previous research and writing of recognized experts provide the researchers familiar with what is already known and with what is still unknown and untested. Since effective research must be based on past knowledge this step helps to eliminate the duplication of what has been done already and provides useful hypothesis and helpful suggestions for significant investigation”.

The review of related literature paves a clear way for the investigator to present in a proper way to solve the prominent problem. It helps the investigator to form proper objective and hypothesis for the study. It avoids unnecessary duplicity of work.

The review of related studies helps in developing insight, which leads to improvement in research designing. It also reveals the different strategies adopted by various investigators in dealing with the research problems pertaining to the subject matter of the present study on test anxiety, temperament, adjustment, and academic achievement. The following is a review of some studies on anxiety and certain related factors.

1. Studies abroad
2. Indian studies
INDIAN STUDIES

A) Studies related to Anxiety

Goswami (2000) conducted a study on *Achievement Motivation and Anxiety among the Children of Working and Non-working Mothers Studying in Secondary Schools of Shillong.*

The findings were: (i) it was found that children of working mothers were more achievement oriented than the children of non-working mothers. (ii) comparison of boys and girls of both working mothers showed that boys of working mothers and non-working mothers showed that boys of working mothers were most achievement oriented than all other groups. (iii) there was no significant difference in anxiety among the groups but the girls of the working mothers found to be more anxious than the rest of the groups.

Alam (2001) conducted a study on *Academic Achievement in Relation to Socio-economic Status, Anxiety Level and Achievement Motivation: A Comparative Study of Muslim and non-Muslim School Children of Uttar Pradesh.*

The major findings were: (i) significant positive relationship had been witnessed between socio-economic status and academic achievement, negative relationship existed between anxiety and academic achievement, positive relationship found between achievement motivation and academic achievement of Muslim and non-Muslim children. (ii) both Muslim and non-Muslim children had significant inverse relationship between socio-economic status and anxiety. Socio-economic status went along with higher achievement motivation. (iii) the academic achievement of non-Muslim children had been found superior in comparison to their Muslim counterparts. The non-Muslim children had less anxiety in comparison to Muslim children. On the measure of
achievement motivation, non-Muslim children were found to be superior to Muslim children.

**Vazalwar and Yadav (2005)** conducted a study on *Tracing out the Relationship of Reading Comprehension in English with Respect to Anxiety, Socio-Economic Status and School Environment*.

The findings were: (i) there was a significant joint effect of anxiety and SES on reading comprehension in English. (ii) there was significant joint effect of SES and School environment on reading comprehension in English. (iii) there was significant joint effect of school environment and anxiety on reading comprehension in English. (iv) there was significant joint effect of anxiety, SES and school environment on reading comprehension in English.

**Agrawal (2006)** conducted a study on *Does Emotional Intelligence Affect Relationship between Deprivation and Academic Anxiety?*

The findings were: (i) the deprivation and academic anxiety were positively correlated in case of more emotionally intelligent girls compared to low emotionally intelligent girls. (ii) The social deprivation and academic anxiety were positively correlated in case of emotionally intelligent girls due to their greater understanding of emotional behaviour of their own and others. The parental deprivation and academic anxiety for more emotionally intelligent girls was positively correlated which could be due to the lack of support from parents in academics which leads to greater academic anxiety among them.
**Naomi (2008)** conducted a study on *Anxiety affects school achievement, yet it is rarely targeted for intervention in students with Emotional or Behavioral Disorders (EBD)*.

This review of the literature summarizes existing research on (i) the prevalence of anxiety disorders in students with EBD, (ii) the academic effects of anxiety disorders, and (3) the school interventions designed to ameliorate them. Conclusions regarding the state of educational intervention for these students. Highlights on measuring psychosocial symptoms, rather than on academic achievement.

**Sinha (2009)** conducted a study *Lowering Our Prestige: American Cinema, Mass Consumerism, and Racial Anxiety in Colonial India*.

This article studied the impact of the American cinema on British India in the early twentieth century. Cinema is a valuable lens with which to study the triangular relationship between the United States, Britain, and South Asia because American films were popular and controversial across national and social divisions and dominated over 90 percent of the film industry in colonial India in the 1920s. The discourse around the film industry constituted a locus in which stereotypes about identity and attitudes toward empire and toward the United States were debated if not resolved. The article argued that American films of the 1920s posited an alternative notion of whiteness and the West that stood for democracy and social mobility, clashed with the traditionalism and hierarchy of empire, and undermined the notion of an Indian identity at odds with foreign technologies and entertainment.

**Russell and Shaw (2009)** conducted a study on *potential impact on students studying in higher education*.

Results showed that approximately 10% of students reported marked to severe social anxiety, a figure that is broadly in line with evidence from recent community
epidemiological surveys of adults and young people. The study suggested that social anxiety is present in a relatively small, but significant proportion of students studying in higher education.

Hemamalini (2010) conducted a study on *English Language Anxiety in relation to English Achievement among the High School Students.*

The major finding of this study was that there was significant relationship between anxiety and English achievement among the high school students of Ramanagaram city.

Deb, Chatterjee and Walsh (2010) conducted a study on *anxiety among high school students in India: comparisons across gender, school type, social strata and perceptions of quality time with parents.*

Results showed that anxiety was prevalent in the sample with 20.1% of boys and 17.9% of girls found to be suffering from high anxiety. More boys were anxious than girls (p<0.01). Adolescents from Bengali medium schools were more anxious than adolescents from English medium schools (p<0.01). Adolescents belonging to the middle class (middle socio-economic group) suffered more anxiety than those from both high and low socio-economic groups (p<0.01). Adolescents with working mothers were found to be more anxious (p<0.01). Results also showed that a substantial proportion of the adolescents perceived they did not receive quality time from fathers (32.1%) and mothers (21.3%). A large number of them also did not feel comfortable to share their personal issues with their parents (60.0% for fathers and 40.0% for mothers).
Khatoon and Mahmood (2010) conducted a study on *Mathematics Anxiety among Secondary school students in India and its relationship to Achievement in Mathematics*. According to the results of the analysis, nearly half of the secondary school students have moderate level of anxiety and females display more anxiety toward math than the male. High level of math anxiety was observed in students of Government and Government aided schools and low level of math anxiety was observed in students of AMU and Missionary schools. Findings also revealed a significant negative correlation (-0.48) between math anxiety and math achievement.

B) Studies related to Academic Achievement

Mehotra (2003) conducted a study on *relationship between intelligence, socio-economic status, anxiety, personality adjustment and academic achievement of high school students*. The major findings of the study were: (i) both boys and girls there was inverse relationship between level of anxiety and academic achievement. (ii) There was a positive relationship between intelligence and academic achievement. (iii) In general the girls had a comparatively higher level of anxiety than boys.

Singit (2003) conducted a study on *achievement motivation and parental back-ground as the determinants of student’s academic achievement*. The major findings of the study were: (i) academic achievement and achievement motivation were positively correlated. (ii) children of both patents working group had better academic achievement. (iii) there was no difference in the achievement motivation of children due to patents working. (iv) Academic achievement of students
was not affected by parents education and (v) parents education did not affect achievement motivation of students.

**Modi (2005)** conducted a study of *Academic Achievement, Academic Anxiety and General Anxiety in Schedule Caste and General Caste Students*.

The findings of the research were: (i) the general caste and schedule caste students had average level general anxiety and very low academic anxiety. (ii) the general caste and schedule caste students had high academic anxiety than general anxiety. (iii) academic achievement of general and schedule caste students increased when they had general anxiety and academic anxiety. (iv) general anxiety and academic anxiety of schedule caste students were lower than general students. (v) there was no specific difference between academic achievement of general and schedule caste students.

**Saini (2005)** conducted a study on *family environment and academic achievement of adolescent children of working and non-working mothers*.

The major finding of the study were: (i) that the family environments of adolescent children of working and non-working mothers were significantly different. In respect of academic achievement also children of working mothers were much better than the adolescent children for non-working mothers.

**Vamadevappa (2005)** conducted a study on *impact of parental involvement on academic achievement*.

The major findings of the study were: (i) there was positive and significant relationship between parental involvement and academic achievement, (ii) there is a significant difference in the achievement scores of boys and girls of high parental in development group (iii) there was no significant difference in the academic achievement
scores of boys and girls of low parental involvement group (iv) there was significant difference between high achievers and low achievers with respect to parental involvement and (v) there was a significant difference between boys and girls in their academic achievements.

C) Study related to Temperament

Krishnakumar, Sumesh and Mathews (2006) conducted a study on Temperament Traits Associated with Conversion Disorder.

Children with conversion disorder experienced significantly more stressful life events compared to the children in the control group. The stress factors included scholastic difficulties, examination failures, punishment by teacher, conflict with peers, parental disharmony and family problems and sibling rivalry. The characteristic temperamental traits associated with conversion disorder where there is low emotionality and low threshold of responsiveness.

D) Studies related to Adjustment

Rani (2001) conducted a study on the comparative study of Achievement of Male and Female Scheduled Caste Students in relation to their Locus of Control, Adjustment and Values.

The findings of the study were: (i) the academic achievement of male scheduled caste students was affected by their adjustment. (ii) the academic achievement of male scheduled caste students were affected by their poor Adjustment. (iii) the academic achievement of male scheduled caste students were affected by their better emotional adjustment. (iv) the academic achievement of male and female scheduled caste students were not affected by their poor emotional adjustment. (v) the academic achievement of male scheduled caste students were affected by their better social adjustment. (vi) the
academic achievement of male scheduled caste students were affected by their poor social adjustment. (vii) the academic achievement of male scheduled caste students were affected by their better educational adjustment. (viii) the academic achievement of male scheduled caste students were affected by their poor educational adjustment.

Devi (2003) conducted a study on *Adjustment of Students in relation to Personality and Achievement Motivation*.

The findings of the study were: (i) achievement motivations had no effect on the adjustment. (ii) extraversion had positive effect on social, educational and general adjustment. (iii) neuroticism had negative effect on the emotional, social, educational, and general aspects of adjustment. This implies that emotional stability had positive effect on all these aspects of adjustment.

Naastepad (2003) conducted a study on *Restoring Macroeconomic Stability through Fiscal Adjustment: a Real-Financial CGE Analysis for India*.

This paper examined why this might be so in the light of India’s experience with stabilization in response to the BoP crisis in 1991. It does so using a novel real-financial computable general-equilibrium model. Focusing on credit rather than money, the model went beyond earlier modeling approaches by (i) incorporating credit rationing, (ii) recognizing the dual role of credit for working capital and investment, and (iii) allowing for switches between credit-constrained, capacity-constrained, and demand-constrained, regimes. The simulations indicated that the macroeconomic effects of monetized deficit reduction differed widely depending on the mode of financing and on initial conditions in real and financial markets. Whenever fiscal reform leads to a squeeze on available working capital credit, deficit reduction will lead to only a limited inflation decline and a modest BoP improvement.
Thakkar (2003) conducted a study on Academic Achievement, Adjustment and Study Habits of Rural and Urban Students.

The findings of study were: (i) there was no significant relationship in academic achievement and study habits for rural and urban students. (ii) with regard to adjustment, in the areas of home and family, personal and emotional and total adjustment, there was positive significant difference between rural and urban students. However, in the areas of social and educational adjustment this difference was not significant. (iii) there was no significant correlation between academic achievement and study habit among rural and urban locality. (iv) there was no significant correlation between academic achievement and adjustment habit among rural and urban locality. (v) there is no significant correlation between study habits and adjustment among rural and urban locality. (vi) positive significant difference between the study habits of low and high achieving students among the rural students. (vii) on the urban side this difference between study habits of low and high achieving students was not significant differ. (viii) with regard to adjustment among low and high achieving students on the rural section revealed a positive significant difference between low and high achieving students in the areas of home and family, personal and emotional, education, health and total adjustment. In social adjustment there was no significant difference observed between both low and high achieving groups. (ix) on the urban locality, there was no significant difference between low achieving and high achieving students in all the five dimensions of adjustment. On the whole, it was studied that the adjustment of high achievers was better as compared to low achieving students. (x) there was no significant difference in the study habits and academic achievement among rural and urban girls with regard to adjustment where there was significant difference in the areas of home and family, personal and educational adjustment. On the other hand in the area of social and health
adjustment, there was no significant difference observed between rural and urban girls. (xi) there was no significant difference observed between rural and urban boys with regards to academic achievement and study habits. (xii) the adjustment pattern showed that urban boys were slightly better adjusted than their rural counterparts in the areas of home and family, personal and emotional, health adjustment. In the area of social adjustment, the rural boys were slightly better adjusted in comparison to the urban students. In the areas of home and family, personal and emotional and health adjustment significant difference was observed between rural boys and urban boys. (xiii) there was a very significant difference in the academic achievement scores and study habits of some students before and after the therapeutic training was imparted.

**Jha and Tulsayan (2005)** conducted a study on *machine tool absorption and capital formation in India: dynamics of the equilibrium adjustment process*.

Has the relationship between gross fixed capital formation and machine tool supply remained the same pre- and post-1991? A look at short-run deviations of machine tool supply from the demand warranted by GFCF and also an attempt to test and quantify an error correction model between machine tool supply and GFCF.

**Rao and Chakraborty (2006)** conducted a study on *multilateral adjustment lending to states in India: hastening fiscal correction or softening the budget constraint?*

The widening fiscal deficit of sub-national governments had made the task of macroeconomic stabilisation much more difficult and complex. In many countries, including India, multilateral lending institutions provide assistance for sub-national fiscal reforms through structural adjustment loans (henceforth SAL) with conditionalities heavily loaded with fiscal correction measures. This paper examined the fiscal impact of SAL in Indian states by analyzing the quantitative and qualitative aspects of SAL-
induced fiscal reforms. Econometric investigation of fiscal impact revealed that state specific effect of SAL in terms of fiscal consolidation had been mixed. There was evidence of softening of the budget constraints in some states, but there was also evidence of greater reduction in fiscal imbalances of SAL states than non-SAL states. It was also seen that much of the fiscal gains had occurred through improved revenue productivity of the tax system and not through expenditure restructuring. It was also seen that the poorer states had preferred to reduce their developmental expenditures to deal with fiscal stress and to comply with fiscal correction targets. This, in turn, has had adverse growth implications. The paper concluded that the benefits and the acceptability of SAL at the sub-national level in India would critically depend on factors such as the qualitative change in government expenditure in meeting deficient delivery of public services at state level, and the removal of state level social and infrastructural bottlenecks for promotion of growth by releasing government resources through expenditure restructuring and reform.

**Parveen (2006)** conducted a study on *teaching aptitude in relation to general teaching competency, professional teaching and academic achievements for B.Ed pupil teachers*.

On the basis of the result of the study, the following conclusions were drawn: it was observed that female arts pupil teachers secured significantly higher mean scores than their counterpart male arts pupil teacher. It was found that teaching aptitude of the pupil teacher was significantly correlated with their general teaching competence, professional interest and academic achievements. General teaching competence and professional interest of the pupil teachers significantly affected their teaching aptitude. In addition to this, effect of academic achievement on teaching aptitude of the pupil teachers was positive but not significant at acceptable level of confidence.
Dutt and Samanta (2007) conducted a study on *like the drifting grains of sand*: *vulnerability, security and adjustment by communities in the charlands of the damodar river, India*.

Charlands are islands formed in major river systems particularly in the flat deltaic plains such as those in the Bengal delta in eastern India and Bangladesh. The charlands in the lower reaches of the Damodar River in India are prone to frequent floods, shifting river channels and consequent riverbank erosion. In spite of these risks posed by the environment, migrant communities from Bihar and Bangladesh settle in the charlands because the soils were fertile, and because being untitled, they were relatively cheaper than legal lands. This paper explored the mental maps or perceptions that the chouras – the charland inhabitants – have of their places of living. We ask: How do the chouras see their fragile environment? Our findings were as follows: first of all, we agreed that the perceptions of vulnerability and insecurity are subjective, and may differed widely between different communities or groups living in the charlands. Secondly, we noted that 'adaptation' might be too broad a term; the specific process was more contingent than a long-term adaptation and best described as 'adjustment'. Finally, we noted that in light of our study into the livelihoods that people keep pursuing in marginal environments such as that of chars, a felt need had arisen to redefine categories such as 'resilience', 'vulnerability' or 'security'.

Francies (2007) conducted a study on *emotional intelligence and academic achievement of the students of model residential schools*.

The major findings of the study were: (i) there was no significant difference between IX and X standard students of model residential schools in their emotional intelligence. (ii) there was no significant difference between the male and female
students of model residential school with regard to academic achievement. (iii) there was no significant relationship between emotional intelligence and academic achievement of model residential school students.

**Parmar and Rohner (2008)** conducted a study on *relations among spouse acceptance, remembered parental acceptance in childhood and psychological adjustment among married adults in India*.

This study explored the way in which remembered childhood experiences of maternal and paternal acceptance mediated or influenced in other ways the relation between perceived intimate-partner acceptance and the psychological adjustment of married adults in India. Results of simple correlations based on data from four self-report questionnaires showed that the more accepting both men and women saw their spouses to be, the better was their psychological adjustment; similarly, the more accepting men and women remembered both their mothers and fathers to have been when the respondents were children, the better was their psychological adjustment. However, results of multiple regression analyses showed that remembered maternal acceptance no longer made a significant contribution to the psychological adjustment of either men or women when the influence of paternal and partner acceptance was partial out. Remembered paternal acceptance was the best single predictor of psychological adjustment for both men and women, although perceived partner acceptance also made a robust contribution.

**Shanthi (2008)** conducted a study on *influence of school environment of academic achievement of IX standard students*.

The findings of the study were: (i) there was no significant difference between male and female IX standard students in academic achievement. (ii) there was no
significant difference between rural and urban IX standard students in academic achievement. (iii) there was no significant difference between government, aided and self-financed IX standard students in academic achievement. (iv) there was no significant relationship between school environment, school management, physical facility, teacher role, peer group relationship teaching techniques, and academic achievement of IX standard students.

Sharma (2010) conducted a study on Relationship of Creativity with Academic Achievement, Achievement Motivation, Self-Concept and Levels of Adjustment among Adolescents.

The different levels of all independent variables were found and by taking three variables at a time, it was found that (i) there was no significant interaction effect of creativity, achievement motivation, self concept, index of brightness and adjustment on mean performance of academic achievement of adolescents. (ii) there was significant contribution of creativity, achievement motivation and index of brightness in predicting academic achievement of adolescents, whereas self concept and adjustment did not contribute in predicting academic achievement of adolescents. (iii) index of brightness and adjustment were negatively correlated to creativity, achievement motivation, self concept and academic achievement among adolescents. However, both these variables were positively correlated to each other.

Parmar (2010) conducted a study on perceived teacher and parental acceptance and behavioral control, school conduct and psychological adjustment among school-going adolescents in India.

This study explored the relationship between Indian adolescents’ perceptions of their teachers’ and parents’ (mothers’ and fathers’) acceptance and behavioral control,
students’ conduct in school, and students’ psychological adjustment. Results showed that the students perceived their teachers, mothers, and fathers to be warm and accepting, but boys experienced more teacher acceptance than girls. Boys also experienced more maternal acceptance than girls. Both boys and girls perceived teachers as well as parents to be firm in behavioral control. Teachers reported both genders to be well behaved, though girls tended to be somewhat better behaved than boys. Both boys and girls self-reported minor psychological adjustment problems, though the more caring students perceived their teachers and parents to be, the better were their psychological adjustment. In addition, the less controlling girls (but not boys) perceived their teachers and parents to be, the better was their psychological adjustment. Regarding school conduct, only perceived paternal and maternal – but not teacher – acceptance were associated with boys’ behavior in school. For girls, however, both teachers’ and parents’ acceptance and behavioral control were significantly correlated with school conduct, though only perceived teacher acceptance made a unique contribution to their school behavior.

**Acharya (2010)** conducted a study on *security speed of Adjustment and Market Quality, A Case of National Stock Exchange of India.*

This paper examined the impact of changes in market structure on market quality through security speed of adjustment coefficients, by employing ARMA model. The average result of cross-section of companies did not show any systematic pattern in terms of persistent under reaction or overreaction. The study did not find significant difference in the speed of adjustment of small and large capitalization stocks.
STUDIES ABROAD

A) Studies related to Anxiety

Pam (2002) conducted a study on *anxiety and critical thinking relationships to microcomputers*.

As the use of microcomputers continues to increase in daily affairs, so does the demand for formal adult microcomputer training.

Computer anxiety and the implications it had on effective microcomputer instruction. Presents theories and methods to help instructors reduce computer anxiety in adults learning to use computers.

Ma (2003) conducted a study on *effects of early acceleration of students in mathematics on attitude towards mathematics and mathematics anxiety*.

This study examined the effects of early acceleration of students in mathematics on the development of their attitudes toward mathematics and mathematics anxiety across junior and senior high school. Data were derived from the Longitudinal Study of American Youth (LSAY). Hierarchical linear modeling (HLM) analyses showed that attitudes declined in the same degree between accelerated and no accelerated gifted and honors students, but declined significantly faster in accelerated than no accelerated regular students. Accelerated gifted students did not increase their anxiety. Anxiety grew at a similar rate between accelerated and no accelerated honors students, but accelerated regular students increased their anxiety significantly faster than no accelerated regular students.
Kapçı (2004) conducted a study on *bullying type and severity among elementary school students and its relationship with depression, anxiety and self-esteem*. The results demonstrated that 40% of children had been exposed to physical, verbal, emotional and sexual bullying. Bullying was also found to be more related to psychological variables, rather than demographic ones.

Eremsoy (2005) conducted a study on the *students under academic stress in a Turkish University: variables associated with symptoms of depression and anxiety*. Two regression analysis were conducted to see different variables associated with depression and anxiety symptoms separately. Consistent with the expectations, depression and anxiety had overlapping predictors, such as negative automatic thoughts and hopelessness. However, adequacy of problem-solving abilities seemed to be associated with anxiety symptoms.

Yan (2006) conducted a study on *factors affecting the state anxiety level of higher education students in Macau the impact of trait anxiety and self-esteem*. The aim of this study was to find out the levels of anxiety of night-class students in higher education in Macau two weeks before the final examination. The Chinese version of Rosenberg’s self-esteem scale (Rosenberg, 1965) was applied to found out the relationship between students’ self-esteem and their trait and state anxieties. Generally speaking, night-class students, who had full-time jobs during the day, had significantly higher levels of anxiety than day class students, who were either unemployed or engaged in part-time employment.
Putwain (2007) conducted a study on *Researching academic stress and anxiety in students: some methodological considerations*.

The study investigated the issue of academic stress in school children and how it may affect emotional well-being, health and performance on school assessments. The terms ‘stress’, ‘anxiety’ and ‘worry’ were used interchangeably in the literature as if they referred to the same phenomenon, and the domains of ‘examination stress’ and ‘academic stress’. There was an overwhelming bias in the research towards quantification and ways of ‘measuring’ stress and anxiety in students. The usefulness of this approach was considered along with the potential advantages of alternative approaches.

Xie, Leong and Feng (2008) conducted a study on the *culture-specific personality correlates of anxiety among Chinese and Caucasian college students*.

The results indicated that socially prescribed perfectionism was a better predictor of social anxiety for the Chinese participants, but of trait anxiety for the Caucasian participants. Independent self-construal predicted social anxiety better for the Caucasians than for the Chinese.

Kaur (2009) conducted a study on *relationship of hope and anxiety in graduate-level students*.

The findings from the study demonstrated that students exhibit high level of hope and anxiety. The results also showed that good teaching, exposure to material beforehand, studying and reassurance are helpful strategies to reduce students’ anxiety.
Bekdemir (2010) conducted a study on *Pre-service Teachers' Mathematics Anxiety Related to Depth of Negative Experiences in Mathematics Classroom while they were Students*.

The findings showed that many pre-service teachers had mathematics anxiety and that the worst experience and the most troublesome mathematics classroom experience had a direct influence on mathematics anxiety in pre-service teachers.

Smith (2011) conducted a study on *Anxiety, Knowledge and Help: A Model for how, Black and White College Students Search for on-line health Information on the Internet*.

The study using the ‘think aloud’ protocol, allows for the collection of data in real time. Eighty percent of students regardless of race did not know how to properly search for online health information. The researcher discusses the need for online health information literacy training, the theories that might explain why black students searched the way that they did, and the challenges to providing culturally-sensitive online health information literacy training for African-Americans who had been historically suspicious of the United State’s health care system.

**B) Studies related to Academic Achievement**

Klein (2004) conducted a study on *gender related achievement differences the teacher gender of the students*.

Stated that the gender related achievement differences could be due to teacher gender rather than the gender of the students. The gender of teachers contributed significantly to variance in assigned grades, whereas the students’ gender only influenced achievement when the teacher was male.
Lupart, Cannon and Telfer (2004) conducted a study on boys and girls have a positive attitude toward education.

Found that the Research had shown that both boys and girls can had a positive attitude toward education, but the girls’ positive attitude is more related to their love of learning, as compared to boys, whose attitude toward school had more to do with the socialization aspect.

Bhanot and Jovanovic (2005) conducted a study on achievement differences between the boys and girls.

This reported that boys were recipients of more parental intrusive support with homework; despite this fact, girls were more sensitive to the little help they did get, especially when the assistance wa in math. These behaviors further strengthen the girls’ beliefs that they were not strong in math and that it was a “male” subject. Parents’ perceptions were consistent with the actual achievement differences between the boys and girls.

Herbert and Stipek (2005) conducted a study on actual mathematical achievement of the students.

Reported that the emergence of gender differences begins as early as third grade. Third grade girls rated their math competencies lower than the boys even though there are no gender differences in the actual mathematical achievement or teachers’ ratings of these students’ math abilities.

Malik and Balda (2006) conducted a study on anxiety and relationship exists between psychological stress and academic achievement of high IQ adolescents.

The study aimed at finding psychological stress and academic achievement of high IQ adolescents. Bisht Battery of Stress Scales was used to assess the amount of
stress on these adolescents. Academic achievement was assessed on the basis of average
of marks obtained in last three examinations. Correlation coefficients between stress
scores and academic scores were computed. Academic achievement was found to be
negatively and significantly correlated with all types of stress except existential stress.

Ademokoya and Shittu (2008) conducted a study on establishing relationship between
some intrinsic factors in these students and their academic achievements becomes very
imperative.

Since every class of students with hearing disability is always a heterogeneous
one, the need for establishing relationship between some intrinsic factors in these
students and their academic achievements becomes very imperative. Findings showed
that postlingually hearing disabled students were superior to their prelingually hearing-
disabled colleagues, male students did better than female students and student with high
self-concept outclassed those with low self concept. It was therefore recommended that
teachers and curriculum developers should adequately consider these findings in
teaching and curriculum development activities.

Kathy and Lynda (2008) conducted a study on anxiety and critical thinking
relationships academic achievement.

The purpose of this study addressed that there was a specific relationships
between parenting styles and six priority adolescent risk behaviors. Adolescents raised in
authoritative households consistently demonstrate higher protective and fewer risk
behaviors than adolescents from non-authoritative families. There was also considerable
evidence to show that parenting styles and behaviors related to warmth, communication
and disciplinary practices predict important mediators, including academic achievement
and psychosocial adjustment. Careful examination of parenting style patterns in diverse
populations, particularly with respect to physical activity and unintentional injury, would be a critical step in the development of efficacious, culturally tailored adolescent health promotion interventions.

Yara and Olatunde (2009) conducted a study on relationship among teachers’ attitude and students’ academic achievement in secondary school students. The study found out the relationship among teachers’ attitude and students’ academic achievement in secondary school mathematics. The findings revealed that there was good and positive attitude of teachers towards the teaching of mathematics in secondary schools in spite of the shortcomings that has bedeviled the teaching profession and particularly in the teaching of mathematics. It is very important that teachers of mathematics should be adequately remunerated and well equipped and be psychologically prepared to teach the subject in the secondary schools.

Khan (2010) conducted a study on perceived teacher acceptance, parental acceptance, academic achievement, and school conduct of middle school students in the Mississippi delta region of the United States. This study investigated the effects of perceived teacher acceptance as well as perceived maternal and paternal acceptance on the academic achievement. Results showed that perceived teacher acceptance contributed significantly and independently to variations in both school conduct and GPA among boys, but not girls.

Mok and Kennedy (2011) conducted a study on academic attribution of secondary students: gender, year level and achievement level. This study is concerned with the attribution of secondary students. Causal interpretations for academic success and failure were analyzed to investigate the effect of gender, year level and achievement level on students’ academic attributions in Hong
Kong, a Confucian Heritage Culture. The study found secondary students of both genders and across all achievement and year levels, consistently ascribed to effort as the most important reason for academic outcomes. Secondary students were significantly more inclined than students of lower levels to attribute their academic outcomes to effort and strategy use.

C) Studies related to Temperament

McKnight and Huebner (2002) conducted a study on relationships among stressful life events, temperament, problem behavior, and global life satisfaction in adolescents. The relationships among stressful life events (SLEs), temperament, externalizing and internalizing behaviors, and global life satisfaction were investigated. The Students’ Life Satisfaction Scale, the Youth Self Report (YSR) form of the Child Behavior Checklist, a portion of the Life Events Checklist, and the Abbreviated Junior Eysenck Personality. A modest correlation was found between life satisfaction and extraversion, whereas moderate correlations were found between life satisfaction and Neuroticism and life satisfaction and SLEs. Based upon hierarchical regression analyses, temperament variables accounted for approximately 16% of the variance in predictions of life satisfaction ratings. When SLEs were added, an additional 3% of the variance in life satisfaction ratings was subsequently explained. Life satisfaction did not operate as a moderator between SLEs and problem behavior. However, when global life satisfaction was added as a mediator variable, results indicated a partial mediational effect, particularly on internalizing behavior.
Kranenburg (2002) conducted a study on *development of empathy in girls during the second year of life: associations with parenting, attachment, and temperament.*

The development, antecedents, and concomitants of empathic concern in the second year of life were examined. Associations with parental sensitivity, children’s fearfulness and attachment security were investigated. Empathic concern was assessed from the girls’ responses to simulated distress in their mothers and in an unfamiliar person. Temperamental fearfulness was observed when they were confronted with potentially scary items. Attachment security was assessed with the Strange Situation procedure, and parental sensitivity was measured in problem-solving situations both at home and in the lab. Empathic concern for the mother’s distress increased, whereas empathy for the stranger decreased. A more fearful temperament and less attachment security predicted less empathic concern for the stranger’s distress. Antecedent and concurrent measures of parenting showed disappointingly weak associations with empathic concern. Empathy for strangers in distress requires the regulation of negative emotions for which fearful and insecurely attached girls seem to be less well equipped.

Pedlow, Sanson and Wales (2004) conducted a study on *children’s production and comprehension of politeness in requests: relationships to behavioural adjustment, temperament and empathy.*

This study investigated the relationships of children’s behavioural adjustment, temperamental approach tendencies and empathy to their ability to produce and comprehend one aspect of politeness (namely level of directness) in requests. The study showed that high levels of anxious fearful behaviour problems increased the likelihood of producing less direct requests to more powerful others while high levels of approaching temperament increased the likelihood of producing less direct requests to more distant others. High levels of hostile aggressive behaviour problems increased the
likelihood of producing direct requests to more distant others. By comparison high levels of approaching temperament, empathy and social anxiety increased the likelihood of children judging more direct requests to more powerful others to be effective. The findings supported the view that individual differences are related to children’s use of directness in response to variation in the social context of request situations.

Martini, Root and Jenkins (2004) conducted a study on *low and middle income mothers’ regulation of negative emotion: effects of children's temperament and situational emotional responses.*

This study investigated the effects of situational (child situational emotions) and dispositional (child temperament) child variables on mothers’ regulation of their own hostile (anger) and no hostile (sadness and anxiety) emotions. Children’s situational emotions (anger, sadness, or fear) and parent emotion type (hostile or no hostile) were important predictors of mothers’ regulation, but their effects were influenced by SES: Middle income mothers were more likely to control hostile than no hostile emotions in response to child anger and sadness, and more likely than low income mothers to control hostile emotions in response to child sadness and fear. Low income mothers were more likely than middle income mothers to control no hostile emotions in response to child anger. However, results also suggested that differences in emotion regulation between low and middle income mothers might stem from the link between SES and authoritarian parenting beliefs. Maternal regulation of negative emotion was not predicted by child temperament.
Liliana (2006) conducted a study on *growth in temperament and parenting as predictors of adjustment during children’s transition to adolescence.*

The author examined relations among demographic risk (income, maternal education, single-parent status), growth in temperament (fear, irritability, effortful control), and parenting (rejection, inconsistent discipline). Family income was related to higher initial levels of fear, irritability, rejection, and inconsistency and lower effortful control but was not related to changes in these variables. Higher initial rejection predicted increases in child fear and irritability. Higher initial fear predicted decreases in rejection and inconsistency. Higher initial irritability predicted increases in inconsistency, and higher initial effortful control predicted decreases in rejection. When growth of parenting and temperament were considered simultaneously, increases in effortful control and decreases in fear and irritability predicted lower. The findings suggested that temperament and parenting predict changes in each other and predict adjustment during the transition to adolescence.

Way, Reddy and Rhodes (2007) conducted a study on *students’ perceptions of school climate during the middle school years: associations with trajectories of psychological and behavioral adjustment.*

A cross-domain latent growth curve model was used to examine the trajectories of change in student perceptions of four critical dimensions of school climate (i.e., teacher support, peer support, student autonomy in the classroom, and clarity and consistency in school rules and regulations). Findings indicated that all of the dimensions of perceived school climate declined over the 3 years of middle school. Furthermore, declines in each of the dimensions of perceived school climate were associated with declines over time in psychological and behavioral adjustment. Moreover, the direction of effects between each dimension of perceived school climate...
and psychological or behavioral adjustment were often unidirectional rather than bi-directional, underscoring the role of perceived school climate in the psychological and behavioral health of early adolescents.

Laible, Eye and Carlo (2008) conducted a study on *dimensions of conscience in mid-adolescence: links with social behavior, parenting, and temperament.*

The purpose of this study was to determine whether aspects of conscience cohere into broader dimensions and to examine how these broader dimensions of conscience relate to parenting, temperament, and social behavior. High levels of parental inductive discipline and low levels of parental power assertion were associated with high levels of moral affect, whereas high levels of persistent discipline were associated with increased moral cognition. High negative reactivity, however, was only associated with high levels of moral affect. In general, higher levels of moral affect were associated with pro-social behavior and moral conduct during bullying. Higher levels of moral cognition were associated with less participation in bullying, more altruistic behavior, and more frequent helping of the victims of bullying.

Verstraeten and Vasey (2009) conducted a study on *temperament and risk for depressive symptoms in adolescence: mediation by rumination and moderation by effortful control.*

The study examined the relations between temperament, ruminative response style and depressive symptoms both cross-sectionally and prospectively (1 year follow-up) in a community sample of 304 seventh- through tenth-graders. First, higher levels of negative affectivity (NA), lower levels of positive affectivity (PA) and lower levels of effortful control (EC) were found to be associated with higher levels of depressive symptoms. Second, the association between NA and PA on the one hand and depressive
symptoms on the other was significantly moderated by level of EC (low PA and high NA are associated with depressive symptoms only if EC is low) and these relations were moderated by sex in the cross-sectional data. In the prospective data, T1 depressive symptoms and PA predicted T2 depressive symptoms; with EC approaching significance. Third, rumination also predicted T1 as well as T2 depressive symptoms. Finally, support was found for a model of moderated mediation: higher levels of NA were associated with higher levels of ruminative response style, which was in turn related to more depressive symptoms but only in individuals with low EC and this was true for the cross-sectional as well as the prospective data albeit with noteworthy differences in pattern.

These findings confirmed and extended previous findings on the associations between temperament, response styles and depression in adolescence and, as such, add to the growing body of research providing support for the applicability of cognitive vulnerability theories to depression in younger populations.

Nichiporuk (2010) conducted a study on analysis of the interdependence of temperament, neuroendocrine control, and psycho physiological state during dry immersion.

The interdependence of temperament and the hormonal and psycho physiological states was investigated in eight young volunteers during seven-day dry immersion (DI). The levels of insulin and sex, steroid, and thyroid hormones in the blood and the psychomotor parameters were determined on days 3 and 7 of DI and on day 7 of recovery. Before DI, the volunteers filled in Cattell’s personality questionnaire. During DI, anxious subjects spent less time to compare visual patterns, demonstrating a stably high speed of reactions with a slight quality loss. Extraverts showed a high speed of reactions and stability of psychomotor parameters without an increase in the number of
errors. Easy-tempered and introvert subjects retained inherently high insulin concentrations in DI. Support deprivation was accompanied by the drop of the triiodothyronine and cortisol levels and an increase in prolactin and thyroxin. The results of multiple correlation analysis led to the conclusion that DI emphasizes the role of original extra-introversion and dampers the original anxiety. Success could be attained by adequate alteration of the levels of steroid and thyroid hormones with effectively balanced vagoinsulin-sympathoadrenal neuroendocrine control and monoaminergic CNS activity.

Tumanova and Kayikci (2011) conducted a study to examine the relationship between articulation rate, frequency and duration of influences of different types, and temperament in preschool children who stutter (CWS).

Findings indicate that for some CWS, relatively longer sound prolongations co-occur with relatively slower speech rate, which suggested that sound prolongations, across a range of durations, may represent a distinct type of SLD, not just in their obvious perceptual characteristics, but in their potential influence on overall speech production at multiple levels learning outcomes.

D) Studies related to Adjustment

Li and Gasser (2005) conducted a study on predicting Asian international students’ sociocultural adjustment: a test of two mediation models.

Integrating a number of theoretical perspectives, this study examined predictors of Asian international students’ socio-cultural adjustment. A total of 117 students (aged 18–46 years) from 17 Asian countries and regions completed questionnaires about their socio-cultural adjustment, contact with the hosts, ethnic identity, and cross-cultural self-efficacy. As hypothesized, contact with the hosts partially mediated the effect of cross-
cultural self-efficacy on socio-cultural adjustment. The hypothesis that contact with the hosts would mediate the effect of ethnic identity on socio-cultural adjustment was not supported.

**Galloway and Jenkins (2005)** conducted a study on *adjustment problems faced by International students in the United States: a comparison of international students and administrative perceptions at two private, religiously affiliated Universities.*

International students and the faculty and administrators charged with their oversight were surveyed at two religiously affiliated, private universities to determine the extent of their adjustment problems in the United States. Although the international students were found to have only minor adjustment problems in the twelve areas covered by the Michigan International Student Problem Inventory, university administrators and faculty consistently overestimated the extent of these problems and misunderstood the relative importance of the various problem areas. Results revealed that problems with the English language were the largest single determinant of international student problems, followed in effect size by marital status and country of origin.

**Michael and Snyder (2005)** conducted a study on *getting unstuck: the roles of hope, finding meaning, and rumination in the adjustment to bereavement among college students.*

The relationships between hope, bereavement-related rumination, and finding meaning (making sense and benefit finding) were examined. Finding benefits in bereavement was associated with positive adjustment for those who recently experienced the death of a loved one, whereas it was related to negative adjustment for those who experienced the death longer ago. Higher hope predicted greater well-being, but it was not related to rumination or finding meaning.
Omoteso (2006) conducted a study on influence of selected socio-demographic variables on academic adjustment of University students in southwestern Nigeria.

This study examined the nature of the university undergraduate students’ academic adjustment problems and the influence of selected socio-demographic variables of peer status, gender, age and family background on the students’ academic adjustment. Three purposively selected universities in Southwestern Nigeria. Academic Adjustment Inventory was used to gather information from the subjects. The data were analyzed using simple percentages and analysis of variance (ANOVA). The results of the data analysis revealed the nature of the academic adjustment problems of the students. Their problems included inability to get suitable place to study (85%); difficulty in understanding the recommended textbooks (82%); enormity of the work given (e.g. assignments, homework and write-up) (85%) having to move from one lecture room to another (87%) and the strictness of the university (87%). Peer status while in secondary school had significant influence on the students’ academic adjustment but age and family background did not have significant influence on the students’ academic adjustment.


International students in institutions of higher education in English-speaking countries make valuable educational and economic contributions. For these benefits to continue, universities must become more knowledgeable about the adjustment issues these students face and implement appropriate support services. This review identified factors that influenced the adjustment and academic achievement of international students. Adjustment challenges were primarily attributable to English language
proficiency and culture. Achievement was affected by English proficiency, academic skills and educational background. Understanding international student adjustment issues had global implications for intercultural education.

Reynolds and Constantine (2007) conducted a study on cultural adjustment difficulties and career development of International college students.

This study examined the extent to which two dimensions of cultural adjustment difficulties (i.e., acculturative distress and intercultural competence concerns) predicted two specific career development outcomes (i.e., career aspirations and career outcome expectations) in a sample of international college students from Africa, Asia, and Latin America. Although no significant differences among the participants were found by region of origin and gender, multivariate multiple regression analyses indicated that higher levels of acculturative distress were predictive of lower levels of career outcome expectations among these international students. Furthermore, findings revealed that greater intercultural competence concerns were predictive of lower career aspirations and lower career outcome expectations.

Agliata and Renk (2008) conducted a study on college students' adjustment: the role of parent-college student expectation discrepancies and communication reciprocity.

Parents’ influence on college students’ adjustment is underestimated frequently. As college students often set goals based on their perceptions of their parents’ expectations, discrepancies between college students’ and their parents’ expectations may be related to their adjustment. The purpose of this study was to examine parent-college student expectation discrepancies and communication reciprocity as predictors of college students' adjustment. A sub sample of their mothers and fathers also participated in this study. Co relational results revealed that college students report experiencing
lower levels of self-worth and adjustment when higher expectation discrepancies are present between themselves and their parents. Regression results also indicated that expectation discrepancies and college students' perceptions of communication reciprocity are important predictors of college students' self-worth and adjustment. Teaching assertive communication skills to college students and their parents may serve as a means of promoting positive outcomes for college students.

**González and Ting (2008)** conducted a study on the *adjustment of undergraduate latino students at a southeastern university: cultural components of academic and social integration.*

College campuses in the southeast United States are striving to understand and serve their newly arriving Latino students to promote adjustment and academic success. The purpose of this study was to outline the cultural components of academic and social integration of Latino college students at one southeastern campus, based on descriptive survey results. Participant responses reflected relatively smooth academic integration but some complications in the social/cultural areas.

**Ingunn and Edvin (2009)** conducted a study on *role of perceived parental socialization practices in school adjustment among Norwegian upper secondary school students.*

Lack of adjustment or school failure is a concern to educators, educational and school psychologists as well as parents, but few studies had focused on school adjustment during late adolescence.

The results showed that perceived parental practices accounted for moderate, but statistically significant amounts of variance in different aspects of school adjustment. The findings indicated that perceived parental socialization practices were only moderately associated with school adjustment among upper secondary school students.
This probably reflects the fact that the influence of specific parenting practices declines as children and young adolescents mature into late adolescent students.

**Kfaween (2010)** conducted a study on *adjustment students college on the faculty of educational sciences in tafila technical university*.

This study aimed to identify the adjustment level for students in a sample from faculty of education. A random sample of study has been selected use the measure of adjustment to college where the results there indicate that students have a medium level of adjustment to college. And the superiority male and first year students from the village was highest than first year students from city.

**CRITICAL REVIEW OF RELATED LITERATURE**

The investigator has reviewed a total number of seventy-three studies both Indian and Foreign studies. There are forty-two foreign and thirty-one Indian studies. Among them, twenty studies are on anxiety, twelve on temperament, twenty-two on adjustment and nineteen on academic achievement.

The fact is that anxiety, temperament, adjustment and academic achievement are interlinked to a great extent. Anxiety being a negative factor affects the academic achievement of a student. In such a situation, temperament and adjustment act as motivating factors to contribute to the success of students’ performance. Hence, the investigator is able to find out the number of related literature on temperament, adjustment and academic achievement.

The investigator would like to add the following critical comments starting with the variable anxiety. After the critical evaluation of the studies related to anxiety, the investigator has made the following conclusions.
Goswami, Minakshi (2000) found that the children of working mothers were more achievement oriented than the children of non-working mothers. Alam (2001) identified that the academic achievement of non-Muslim children has been found superior in comparison to their Muslim counterparts. Vazalwar and Yadav (2005) observed that there was significant joint effect of school environment and anxiety on reading comprehension in English.

Mehotra (2003) reported that there was positive relationship between intelligence and academic achievement. Venita Singit (2003) observed that the academic achievement of students was not affected by parents education and parents education did not affect achievement motivation of students. Modi (2005) observed that the general caste and schedule caste students had average level general anxiety and very low academic anxiety. Vamadevappa (2005) found that there was a positive and significant relationship between parental involvement and academic achievement. Krishnakumar, Sumesh and Lulu Mathews (2006) found out the characteristic temperamental traits associated with conversion disorder were of low emotionality and low threshold of responsiveness.

Parveen (2006) found that the teaching aptitude of the pupil teacher was significantly correlated with their general teaching competence, professional interest and academic achievements. Shaiju Francis (2007) concluded that there was significant relationship between emotional intelligence and academic achievement of the model residential school students. Shanthi (2008) reported that there was significant relationship between school environment, school management, physical facility, teacher’s role, peer group relationship teaching techniques and academic achievement of X standard students.
Ekta Sharma (2010) showed that there was no significant interaction effect of creativity, achievement motivation, self-concept, index of brightness and adjustment on mean performance of academic achievement of adolescents. However, both these variables were positively correlated to each other.

Parminder Parmar (2010) observed that both the teachers’ and parents’ acceptance and behavioral control were significantly correlated with school conduct, though only perceived teacher acceptance made a unique contribution to their school behavior. Xin Ma (2003) showed that accelerated regular students increased their anxiety significantly faster than no accelerated regular students. Emine Gül Kapçi (2004) observed that bullying is found to be more related to psychological variables, rather than demographic ones. Ekin Eremsoy (2005) revealed that adequacy of problem-solving abilities seemed to be associated with anxiety symptoms. Cheung Hoi Yan (2006) found that night-class students, who had full-time jobs during the day, had significantly higher levels of anxiety than day class students, who were either unemployed or engaged in part-time employment.

David Putwain (2007) revealed that there was an overwhelming bias in the research towards quantification and ways of 'measuring' stress and anxiety in students. Dong Xie, Frederick T.L. Leong and Shoudong Feng (2008) indicated that socially prescribed perfectionism was a better predictor of social anxiety for the Chinese participants, but of trait anxiety for the Caucasian participants. Sandeep Kaur (2009) showed that good teaching, exposure to material beforehand, studying and reassurance were helpful strategies to reduce students’ anxiety. Mehmet Bekdemir (2010) observed that pre-service teachers had over mathematics anxiety and that the worst experience and
the most troublesome mathematics classroom experiences had a direct influence on mathematics anxiety in pre-service teachers.

Poonam Malik and Shanti Balda (2006) found that academic achievement was found to be negatively and significantly correlated with all types of stress except existential stress. Lengua, Liliana (2006) suggested that temperament and parenting predict changes in each other and predict adjustment during the transition to adolescence. Studsrød, Ingunn; Bru, Edvin (2009) showed that perceived parental socialization practices are only moderately associated with school adjustment among upper secondary school students.

The present study is unique for several reasons. It is understood that no study has been undertaken so far that had anxiety, temperament and adjustment. Hence it is understood that the present study is the first in its kind in this aspect. Several studies have been conducted on different groups having anxiety as its focus. But it is understood that no study has so far been conducted on higher secondary students, therefore the study stands unique.

As regards temperament, several studies have been conducted on teachers, student teachers and adolescents in relation to leadership, self-esteem, and academic achievement risk taking attitude, mathematics proficiency, critical temperament, web page design and social competency. But this study is based on temperament is combined with variables namely anxiety, temperament, adjustment and academic achievement, and it is on this ground that it stands different from the rest of the studies conducted earlier.

It is to be noted that the study made on the variable temperaments in India numbers to just one. Therefore, it can be detained that this study is new and different.
No Indian investigators have focused exclusively on the temperament in relation to higher secondary students. A few studies pertaining to the academic achievements of the students, but none has linked academic achievement with adjustment. Therefore, the studies remain unique.

The present study beyond any doubt differs from the above studies in many ways. No study has been found to combine the four variables of anxiety, temperament, adjustment and academic achievement. This is different from other in terms of population and sample. Therefore, it is only relevant for the investigator to carry out to study the influence of anxiety, temperament and adjustment on academic achievement of higher secondary students.