CHAPTER II

REVIEW OF RELATED LITERATURE

“Practically all human knowledge can be found in books and libraries. Unlike other animals that must start a new with each generation, man builds upon the accumulated and recorded knowledge of the past, his constant adding to the vast store of knowledge makes possible progress in all areas of human endeavour.”

Best and Kahn (2005)

A researcher cannot engage in the research successfully unless he becomes adept at locating thesis, dissertations and reports of the studies that embody the bulk of work done in his/her field. A review of related research has an important place in scientific investigation. Review may be defined as an examination of something, with the intention of changing it, if necessary. Before taking up any specific research project in development of a discipline, the researcher must be thoroughly familiar with previous theory of research. To assure this familiarity every research project in the behavioral sciences has to review the available theoretical and research literature. The literature in any field forms the foundation upon which all further work will be built. It is always desirable for a research worker to devote some time in reviewing the related literature. In order to know the studies already conducted in the field and to ensure that what one is going to do is not just a repetition of previous work, the research worker should report significant and landmark studies in the area of the research in hand. As far as possible the latest studies should be mentioned giving evidence that the research worker is well-versed with latest position of research in the area of work. The task of review of literature is highly creative and tedious because researcher has to synthesize the available knowledge of the field in a unique way to provide the rationale for his/her study. The importance of related literature is as follows:
• The review of related literature helps the researcher to define and delimit the study. The knowledge of related literature brings the researcher up-to-date on the work which others have done and thus, to state the objectives clearly and precisely.

• By reviewing the related literature the researcher can avoid unfruitful and useless problem. He can select those areas in which positive findings are very likely to result, and his endeavour would be likely to add the knowledge in a meaningful way.

• Through the review of related literature, unintentional duplication of well-established findings can be avoided.

• Review of related literature helps to know about the recommendations which the previous researchers have listed in their studies for further exploration.

• The conclusions drawn in the study in hand may be compared with previous researches.

• It helps in developing expertise and general scholarship of the investigator in the area.

Thus, we can say that the review of related literature gives an excellent overview of the work that has already been done in the field and about the recent developments in the concerned area of interest.

2.1 STUDIES RELATED TO EMOTIONAL INTELLIGENCE

Aggrawal (1988) indicated that implementation of simple emotional management techniques and inputs of affective domain interventions helps in improving resources. It was further concluded that there is a need to re-examine the non-traditional areas of affective domain and balancing rational intelligence with emotional intelligence.

Woitaszewski (2001) analyzed the contribution of emotional intelligence to the social and academic success of gifted adolescents. The results of hierarchical multiple analyses revealed that emotional
intelligence did not contribute significantly to the social and academic success for gifted adolescents.

Regina (2002) conducted a study on emotional intelligence, burnout and conflict resolution styles of executives. The findings indicated that there was no significant difference in their mean scores of emotional intelligence. The results further indicated that executives with above and below average intelligence were found to be significantly different on smoothing and collaborative resolution styles. The executives with above average emotional intelligence (EQ) were superior in their two styles than that of their counterparts. However, no significant relationships were found between emotional intelligence and burn out measures.

Haskett (2003) explored the relationship between emotional intelligence and teaching success in higher education. The main purpose of the study was to determine the most significant differences in the EQ competencies of award winning teaching faculty. A significant link was found between specific EQ competencies and behaviours of effective teaching.

Rivera (2004) discovered gender differences in emotional intelligence competencies. Women showed a significant difference in seven and men in six out of the twenty one competencies of 'emotional intelligence competency framework' used in the study. Women displayed a high level of competencies at home, as men at their work place.

Philips (2005) analyzed the emotional intelligence and faculty qualities necessary for success in a non-traditional classroom setting. The qualitative data from the narrative interviewers indicated that faculty members who scored either high or low on emotional intelligence assessment stressed flexibility and strong inter-personal relationship skills in the classroom. However, the faculty members who scored high on emotional intelligence assessment did
demonstrate more optimism than did those scoring low on emotional intelligence.

Romoold (2006) assessed the effectiveness of the Enneagram educational programme on the following competencies of emotional intelligence of student-teachers: a) emotional self-awareness, b) emotional expression, c) creativity and, d) interpersonal connections. Findings revealed a significant difference between the mean scores for emotional self-awareness, emotional expression, emotional awareness of others, creativity and inter-personal connections. The majority of responses in the reaction scale indicated that after the interaction programme, improvement has taken place in student–teachers in their interpersonal skills and quality of life.

Upadhyaya (2006) examined the differences in personality traits of high and low emotionally intelligent student-teachers. Findings revealed that student-teachers with low emotional intelligence are more uneasy and worried about future, have unhappy feelings and failures, less cautious, irregular and like to take more rest, restrain others, lack in energy, uninterested and conform to the opinion and accepted path taken by most people. Student-teachers with high emotional intelligence are more competent, more self-confident, hardworking, help others in constructive ways, more motivated, energetic, full of enthusiasm and turn away from accepted or given path or opinion.

Holt (2007) explored the relationship between emotional intelligence and academic achievement in higher education. The findings of the study confirmed that emotional intelligence contributes to and enhances cognitive abilities in college students.

Basu (2008) studied the emotional intelligence and teacher effectiveness of secondary school teachers and explored the relationship between emotional intelligence and teacher effectiveness. A sample of 120 (60 male and 60 female) secondary school teachers from various English and Hindi medium schools of Bareilly district
(U.P.) was used to collect the data. The Emotional Intelligence Scale (EIS) by Hyde, Pethe and Dhar (2002) was used to measure the emotional intelligence of secondary school teachers and the Teaching Effectiveness Scale (TES) by Kumar and Mutha (1999) was employed to assess the effectiveness of secondary school teachers. The ‘t’ test and coefficient of co-relation were applied for the analysis of data. The major findings of the study were: (i) The emotional intelligence of secondary school teachers varied significantly when gender was taken into consideration; (ii) the teacher effectiveness of secondary school teachers differed significantly with respect to gender; (iii) the emotional intelligence of secondary school teacher was significantly positively correlated with their teaching effectiveness.

Bakshi, Kumari and Kumar (2009) assessed emotional intelligence and personality pattern of adolescent boys of different faculties. A sample of 150 boys equally of all faculties i.e. Arts, Commerce and Science studying in Degree College of Jammu were taken on random basis. Test of Emotional Intelligence developed by Chadha and Singh (2001) and Neuroticism, Introversion and Extroversion Inventory (NIEI) developed by Muhar (1992) were used to collect the requisite data. The ‘t’ test and correlation coefficient were calculated to analyse the data. The main findings of the study were: (i) The study revealed significant differences between students of Arts, Commerce and Science streams in their emotional intelligence; (ii) Science and Arts students did not differ significantly in their emotional intelligence; (iii) there was negative relationship between neuroticism and emotional intelligence; (iv) the extroverts and introverts did not differ significantly in their emotional intelligence.

Panda (2009) conducted a study to explore the relationship between emotional intelligence and personality traits of pupil-teachers. The sample consisted of randomly selected 130 pupil-teachers belonging to different localities, gender and personalities. Research tools used for the collection of data were Kundu’s Neurotic
Personality Inventory (1987) and Emotional Intelligence Scale developed by Hyde, Pethe and Dhar (2002). The data were analysed by employing co-efficient of correlation and ‘t’ test. The major findings of the study were: (i) There was significant positive correlation between emotional intelligence and normal behaviour of pupil-teachers; (ii) there was significant negative correlation between emotional intelligence and neurotic behaviour of pupil-teachers; (iii) there was significant difference between normal and neurotic behaviour of pupil-teachers in emotional intelligence; (iv) there was no significant difference in emotional intelligence of male and female pupil-teachers; (v) there was no significant difference in emotional intelligence of rural and urban pupil-teachers.

Sharma (2009) conducted a study on emotional intelligence and creativity of school students. The objective of the study was to examine the relative effects of three types of school environment on the levels of emotional intelligence and creative thinking. The sample consisted of 300 girls (100 each from three types of schools; public, government and Gurukuls). The age of girl students ranged from 14 to 16 years. The Multidimensional Measure of Emotional Intelligence developed by Darolia (2003) and Test of Creative Thinking with Words Torrance (1966) were used for collecting the data. The obtained data were analyzed by using descriptive statistics (mean, standard deviation, skewness and kurtosis) and ‘t’ ratios. The major findings of the study were: (i) Public school students scored significantly high than Gurukul students on three of five measures of emotional intelligence namely; empathy, motivating oneself, handling relations and low on managing emotions; (ii) both groups did not differ significantly on the mean scores of self-awareness. It pointed that public school students tend to be more empathetic, motivating themselves and apt in handling relations but less capable of managing their emotions while interacting with others than Gurukul students; (iii) it was observed that public school students were significantly high on all the factors of creativity i.e. fluency, flexibility, originality and
elaboration; (iv) Gurukul students scored significantly high on two measures of emotional intelligence i.e. awareness and managing emotions than students who were more capable of self-awareness and management of their own emotion while interacting with other than government school students; (v) public school students were found to be high on emotional intelligence as compared to the students of Gurukuls and government schools.

Umadevi (2009) studied the relationship between emotional intelligence, achievement motivation and academic achievement of primary school student teachers. The study was conducted on a sample of 200 primary school student-teachers studying in various B.Ed. colleges of Davangere city in Karnataka which included 100 boys and 100 girls or 131 Arts student-teachers and 69 science student-teachers. Emotional Intelligence Scale by Singh (2004) and Achievement Motivation Test developed by Bhargava (1994) were used for collecting data. Academic achievement scores of students in second year Board examination constituted academic achievement. The data obtained were subjected to descriptive, correlational and differential analysis. Major findings of the study were: (i) There was a positive relationship between emotional intelligence and academic achievement of primary school student-teachers; (ii) there was a positive relationship between achievement motivation and academic achievement of primary school student-teachers; (iii) male and female student-teachers as well as Arts and Science student-teachers did not differ in their emotional intelligence; (iv) male and female student-teachers as well as Arts and Science group student-teachers did not differ in their achievement motivation.

Habib (2010) conducted a study to assess the self-concept of high and low emotional intelligent college going girls. The sample consisted of 200 college going girls of age ranging between 18 and 22 years. Emotional intelligence was assessed by Emotional Intelligence Inventory developed by Mangal and Mangal (2004) and participants
were assigned to high emotional intelligence group and low emotional intelligence group. Self-Concept Questionnaire developed by Saraswat (1984) was administered to these two groups. Scores on self-concept were compared for the high and low emotional intelligence group. The major findings of the study were: (i) Among the six concepts of self-concept, high emotional intelligence group and low emotional intelligence group differed significantly on two aspects namely; temperamental and educational aspects; (ii) there was no significant difference in physical, social, moral and intellectual aspects of self-concept among high and low emotional intelligence groups.

Patnaik and Dash (2010) examined the relationship of emotional intelligence with mental health of students in early and late adolescence. The sample consisted of 40 students from two age groups i.e. 13-14 years and 18-19 years respectively. The younger group of students was selected from class VII and VIII of Kendriya Vidyalaya, Bhubaneshwar. The older group was selected from the students pursing 1st year of integrated MBA course in Utkal University, Bhubaneswar. Modified version of Emotional Intelligence Scale developed by Bhattacharya, Dutt and Mangal (2004) and Mental Health Inventory by Jagdish and Srivastava (1983) were administered on the sampled students. The data collected were subjected to group comparisons and correlational analysis. Based on the findings of the study, following conclusions were drawn: (i) Subjects from both the groups did not differ significantly in terms of their mental health status and the level of their emotional intelligence. However, dimension-wise comparisons revealed that adolescents were significantly higher than their late adolescent counterparts in positive self-evaluation dimension of mental health; (ii) the late adolescent group was significantly higher than the early adolescents in terms of autonomy dimension of mental health. It was quite expected that being older college students, they depend more on their own potentialities rather than other people. With increasing age, adolescents become cognitively more mature and their social circle
widens. Not only cognitively, emotionally also, they become more mature; (iii) it was also reported that in both early and late adolescent stages, students with higher level of emotional intelligence have better mental health status.

Reddy and Venu (2010) studied the impact of gender and locality on emotional intelligence of secondary school students. A sample of 200 boys and 200 girls was taken from rural and urban schools in and around Tirupathi. Emotional Intelligence Scale developed by Thingujan and Ram (1999) was administered to assess the emotional intelligence. The ‘t’ test and ‘F’ values were used to analyse the data. The major findings of the study were: (i) There was significant impact of gender on emotional intelligence. Girls have shown higher emotional intelligence than boys; (ii) there was significant impact of locality on emotional intelligence. Urban students have shown higher emotional intelligence than rural students.

Singh (2010) undertook a study on emotional intelligence of secondary school teachers with the objectives; (i) to study the gender-wise difference in emotional intelligence of secondary school teachers; (ii) to study the difference in emotional intelligence of secondary school teachers with regard to the medium of instruction used in the school. The sample of the study consisted of 140 teachers working in Bareilly city. Emotional Intelligence Scale (EIS) by Hyde, Pathe and Dhar (2002) was used for the collection of data. Mean, standard deviation and t-test were used to analyze the data. The major findings of the study were: (i) Emotional intelligence of teachers differed significantly in relation to their sex and medium of instruction; (ii) English medium teachers were found to be significantly higher in emotional intelligence than the Hindi medium school teachers; (iii) on some aspects of emotional intelligence i.e. on self-motivation, managing relations, integrity, value orientation, commitment and altruistic behaviour, male and female teachers were significantly different from each other; (iv) there was no significant difference between male and female
teachers on empathy, emotional stability and self-development aspects of emotional intelligence; (v) female teachers were more emotionally intelligent than male teachers.

Agnihotri and Malviya (2011) investigated the effect of socio-economic status and sex on the emotional intelligence of undergraduate professional students. A sample of 200 students (100 male and 100 female) was selected randomly from students pursuing BBA course in the Institutes Allahabad city. Two institutions were chosen for the purpose of the study namely; Allahabad Agricultural Institute and United Institute of Management. Test of Emotional Intelligence developed by Mishra (2001) and Socio-Economic Scale constructed by Dubey and Nigam (2006) were used for the collection of data. Data were analyzed by using two-way ANOVA and Post ANOVA ‘t’-test. The main findings of the study were: (i) There was significant effect of SES on emotional intelligence of professional students belonging to upper class, upper middle class, middle class and lower class respectively; (ii) students of different socio-economic classes showed a significant difference on the emotional intelligence scores; (iii) emotional intelligence of students of upper middle class was higher as compared to the students of upper class; (iv) emotional intelligence of middle class was higher as compared to the students of upper class; (v) it was revealed that the effect of SES on emotional intelligence for different levels of sex and for different levels of SES was different; (vi) the effect of SES on emotional intelligence for different levels of sex was different, that is; male and females of the same socio-economic class showed a significant difference on emotional intelligence scores but it was not clear that males and females of which socio-economic class showed a significant difference.

Negi (2011) attempted to study emotional intelligence of teachers working in government and private senior secondary schools with the objectives to compare male and female teachers working in government and private school on the overall emotional intelligence as
well as its different components. A sample of 300 teachers (150 males and 150 females) was selected by convenient sampling method from the selected schools of district Mandi of Himachal Pradesh. The tool used to collect the requisite data was Teachers’ Emotional Intelligence Inventory constructed by Mangal (2004). To study the main and interactional effects of sex and type of schools, two-way ANOVA was applied. The major findings of the study were: (i) Male and female teachers did not differ significantly in their mean scores on self-awareness component of emotional intelligence; (ii) teachers teaching in different types of schools differed significantly in their mean score on awareness of self and others. The teachers of government schools were significantly better on awareness of self and others component of emotional intelligence than the private school teachers; (iii) male and female teachers did not differ significantly in intra-personal management component of emotional intelligence; (iv) teachers teaching in government schools were found to be better on intra-personal management component of emotional intelligence than teachers teaching in private schools; (v) gender and type of schools did not interact significantly to affect the scores on the intra-personal management component of emotional intelligence; (vi) there was no significant difference between male and female teachers in the level of their inter-personal management component of emotional intelligence; (vii) the group of teachers teaching in government and private schools did not differ significantly in their mean scores on inter-personal management. It indicates that two groups stood almost at the same level as far as their level of interpersonal management was concerned; (viii) there was no significant interactional effect of gender and type of school with respect to inter-personal management component of emotional intelligence; (ix) there was no significant difference between male and female teachers in their emotional intelligence; (x) type of schools was found to affect the overall emotional intelligence of teachers significantly in favour of the teachers teaching in government
schools; (xi) type of schools and gender interacted significantly with each other to affect the emotional intelligence of teachers.

Sharma (2011) examined gender differences in emotional intelligence among high school teachers. A sample of 100 teachers (50 males and 50 females) was drawn by adopting random sampling technique from high schools of Agra city. Emotional Intelligence Scale developed by Hyde, Pethe and Dhar (2002) was used for collecting the data and data were analyzed by using t-test. The major findings of the study were: (i) There was significant difference in the emotional intelligence of male and female teachers; (ii) there was significant difference in various factors of emotional intelligence i.e. on self-awareness, empathy, managing emotions, commitment and altruistic behaviour of male and female teachers. On various factors of emotional intelligence, female teachers were better as compared to male teachers; (iii) no significant difference was found between female and male teachers on value orientation and emotional stability component of emotional intelligence.

Sharma and Ahlawat (2011) conducted a study on emotional intelligence of D.Ed. teacher trainees with the objectives: (i) to study the level of emotional intelligence of male and female D.Ed teacher trainees; (ii) to study the level of emotional intelligence of rural and urban D.Ed. teacher trainees; (iii) to compare the level of emotional intelligence of male D.Ed. teacher trainees with female D.Ed. teacher trainees. The study was conducted on 146 D.Ed. teacher trainees of various educational institutions of Rohtak district. Emotional Intelligence Inventory developed by Mangal and Mangal (2004) was used for collecting the requisite data. The main findings of the study were: (i) It was found that majority of D.Ed teachers trainees (52%) were found to have average level of emotional intelligence followed by 38% of D.Ed. teacher trainees having good emotional intelligence; (ii) the study revealed that the male and female D.Ed. teacher trainees
did not differ in their emotional intelligence; (iii) D.Ed. teacher trainees did not differ in their emotional intelligence with regard to locality.

Sood and Anand (2011) studied the emotional intelligence of senior secondary school students in relation to certain socio-demographic variables. In addition, the relationship of emotional intelligence with academic achievement was also explored. A representative sample of 463 senior secondary school students was selected from Mandi, Bilaspur and Hamirpur districts of Himachal Pradesh by employing the multistage random sampling technique. The emotional intelligence of sampled students was measured by Emotional Intelligence Inventory developed by Mangal and Mangal (2004). Further, the marks of students in previous board examination were considered as their academic achievement. The data were analyzed with the help of 'Two-way ANOVA' and 'One-way ANOVA. The main findings of the study were: (i) Girl students residing in urban areas have significantly higher emotional intelligence than boys residing in urban areas respectively; (ii) no family-wise difference in emotional intelligence was found to be significant in male and female as well as rural and urban students studying in senior secondary schools; (iii) similarly, none of the interactional effects between gender, area and family type with regard to their combined influence on emotional intelligence was found to be significant; (iv) emotional intelligence was found to be positively correlated with academic achievement of sampled students.

Agarwal and Gupta (2012) examined the effect of emotional intelligence on teaching effectiveness of teacher educators. Descriptive survey method was used for conducting the present investigation. Random sampling technique was used for the selection of 100 teacher educators (50 male and 50 female) from Agra city. Teacher Effectiveness Scale developed by Kumar and Mutha (1999) and Emotional Intelligence Scale by Hyde, Pethe and Dhar (2002) were used to collect the requisite data. The data were analyzed by making
use of mean, S.D. and correlation. The main findings of the study were: (i) On the basis of mean scores of emotional intelligence of teacher educators, it was concluded that all female teacher educators were emotionally more intelligent in comparison to male teacher educators; (ii) the teacher educators possessed average teaching effectiveness. The mean of female teacher educators was high in comparison to male teacher educators; (iii) the study revealed that emotional intelligence of teacher educators significantly affected their teaching effectiveness; (iv) there was low positive correlation between teacher educators’ emotional intelligence and teaching effectiveness; (v) female teacher educators’ emotional intelligence and teaching effectiveness were at high level in comparison to male teacher educators.

Bency and Nagarajan (2012) conducted a research on emotional intelligence of prospective teachers in relation to their self-concept. The study was conducted on a sample of 200 prospective teachers studying in different Colleges of Education affiliated to Tamil Nadu Teachers Education University, Chennai. The sample was selected on the basis of stratified random sampling technique. The tools used for the study were Emotional Intelligence Scale by Prasad (2009) and Brookover’s Scale of Self-Concept (1967). Pearson product moment correlation and ‘t’ test were applied for analyzing the data. The major findings of the study were: (i) There was no significant difference in emotional intelligence of prospective teachers with regard to optional subjects, marital status, mother’s occupation, monthly income, educational qualification, family status, type of administration, type of school and medium of instruction; (ii) there was significant difference in the emotional intelligence of prospective teachers with regard to father’s occupation. The mean scores showed that father’s occupation (employed) had more emotional intelligence than father’s occupation-(unemployed); (iii) there was significant correlation between emotional intelligence and self-concept of prospective teachers.
Kalara and Nisha (2012) studied the emotional intelligence and personality’s big five factors among school students of Sirsa in Haryana. The sample was taken on the basis of simple random sampling method. A total of 100 students of class XII between the age group of 15-16 years were chosen to collect the requisite data. Emotional Intelligence Inventory by Mangal and Mangal (2004) and NEO Personality Inventory Revised forms (NEOPI-R) developed by Coasta and McCrae (1992) were used for collecting the data. The data collected were subjected to mean, SD, critical ratio and product-moment correlation. The major findings of the study were: (i) Private school students showed higher emotional intelligence than govt. school students; (ii) it was inferred that the personality of private school students was much better as compared to that of government school students; (iii) students with extraversion showed significant relationship between various aspects of emotional intelligence i.e. personal awareness, intra-personal awareness, inter-personal awareness and inter-personal management whereas students with neuroticism showed no significant relationship with any aspect of emotional intelligence; (iv) agreeableness domain of personality showed a significant but negative correlation with intra-personal management aspect of emotional intelligence; (v) consciousness domain of personality exhibited a positive and significant relationship with inter-personal management aspect.

Kumar and Patil (2012) studied emotional intelligence competency of secondary school teachers in relation to their qualification and standard of teaching. For sample selection, multistage random sampling method was employed. The sample comprised of 962 secondary school teachers from 72 schools of 7 tehsils in Stara district of Maharashtra. The researcher specially constructed the Emotional Intelligence Model in Marathi language to measure the emotional intelligence of secondary school teachers. The mean, S.D. and ‘t’ values were calculated by using computer. The major findings of study were: (i) There was no significant difference
between graduate and post graduate secondary school teachers regarding self-aware competency of emotional intelligence; (ii) there was no significant difference between graduate and post-graduate secondary school teachers regarding self-management competency of emotional intelligence; (iii) there was no significant difference between graduate and post graduate secondary school teachers regarding social awareness competency of emotional intelligence; (iv) there was no significant difference between graduate and postgraduate secondary school teachers with regard to management competency of emotional intelligence.

Mahmood (2012) examined the relationship between emotional intelligence, career maturity and self-efficacy of adolescents. The sample consisted of 500 high school students (250 boys and 250 girls) selected from government and public schools of Hyderabad city. Tools for collecting the data included Career Maturity Inventory by Crites (1978); Emotional Intelligence Inventory by Mangal and Mangal (2004) and Generalized Self-Efficacy Scale by Schwarzer and Jerusalem (1995). Descriptive statistics viz. mean and S.D., coefficient of correlation and ‘t’- test were used for analysis of data. The major findings of the study were: (i) Students were having good emotional intelligence and self-efficacy and high career maturity; (ii) career maturity attitude has significant positive correlation with career maturity competence, emotional intelligence and self-efficacy in case of boys of government schools; (iii) significant difference was found between boys from government and public schools favouring career maturity and other personality variables viz. emotional intelligence and self-efficacy; (iv) with regard to comparison between boys and girls of government schools, significant differences favouring boys were witnessed high on career maturity competence, emotional intelligence and self-efficacy; (v) with regard to comparison between boys and girls from public schools, there was no significant difference on career maturity, emotional intelligence and self-efficacy; (vi) there existed significant difference between boys and girls from public and govt.
schools with respect to career maturity, emotional intelligence and self-efficacy.

Mittal (2012) carried out a study on emotional intelligence and adjustment of secondary school students with the objectives: (i) to study the gender-wise difference in the adjustment of secondary school students; (ii) to study the level of emotional intelligence among secondary school students; (iii) to study the relationship between adjustment and emotional intelligence among secondary school students. A sample of 200 secondary school students (100 boys and 100 girls) was selected through multistage random sampling technique. Emotional Intelligence Scale by Hyde, Pethe and Dhar (2002) and Adjustment Inventory for school students by Sinha and Sinha (1980) were used to collect the data. Collected data were analyzed by using mean, S.D., ANOVA and Pearson coefficient of correlation. The major findings of the study were: (i) Secondary school boys were significantly better adjusted than girls; (ii) the adjustment level of secondary school boys and girls having high, average and low level of emotional intelligence differ significantly from each other. Students with high emotional intelligence were highly adjusted and students with low emotional intelligence were least adjusted; (iii) a joint effect of sex and emotional intelligence significantly influenced the adjustment of secondary school students; (iv) a highly negative correlation was found between adjustment and emotional intelligence of secondary school boys; (v) significant and moderate correlation was found between the adjustment and emotional intelligence of secondary school girls.

Pereira and Anu (2012) explored the effectiveness of emotional intelligence enrichment package for enhancing the emotional intelligence of primary school students. A sample of 120 primary school students was selected from schools located in rural, urban, coastal and tribal settings of Kerela and Tamil Nadu. Scientifically constructed and validated Emotional Intelligence Test and self-
developed and validated emotional intelligence enhancement package were used for collecting data. The findings of the study revealed that for total emotional intelligence and all of its dimensions, significant enhancement was seen on emotional intelligence after the intervention of package. The results of the experiment revealed that package could be effectively used for raising the emotional intelligence of upper primary school students.

Sahni (2012) undertook a study on emotional intelligence in relation to occupational self-efficacy and personality of secondary school teachers. The study was conducted on 240 female teachers (35-40 year old) having a teaching experience greater than 5 years who were randomly selected from various secondary schools of Haryana state. Teachers’ Emotional Intelligence Inventory by Mangal (2009), Occupational Self-Efficacy Scale by Pethe, Chaudhary and Dhar (2002) and Introversion–Extroversion Inventory by Aziz and Agnihotry (2008) were used for data collection. The study was an ex post facto type in which descriptive survey method was used. The data were analyzed by employing two-way ANOVA. The major findings of the study were: (i) There existed significant difference in emotional intelligence of secondary school teachers with respect to their occupational self-efficacy; (ii) there existed significant difference in emotional intelligence of secondary school teachers with respect to personality; (iii) there existed significant influence of occupational self-efficacy and personality on inter-personal management skills of secondary school teachers; (iv) secondary school teachers with high occupational self-efficacy were higher on intra-personal and inter-personal management components of emotional intelligence than teachers with low occupational self-efficacy.

Yadav (2012) conducted a study on emotional intelligence and values of adolescents studying in government and non-government schools of Rewari district of Haryana. A sample of 200 students of 11th class was selected randomly. Emotional Intelligence and Value Pattern
of these adolescents were measured by using Mangal’s Emotional Intelligence Inventory (2004) and Personal Value Questionnaire of Sherry and Verma (1998). The major findings of the study were: (i) Adolescent students of government and non-government schools possessed average level of emotional intelligence; (ii) there was no significant difference between the emotional intelligence of government and non-government school students; (iii) there existed no significant difference between the emotional intelligence of male and female students.

Bhandarkar (2013) carried out a study on emotional intelligence of junior college students in relation to their gender, faculty and locality. A sample of 900 junior college students was selected randomly from four rural and four urban junior colleges of Magpur district of Maharashtra. Data were collected by using Emotional Intelligence Scale prepared by the researcher. The data were analysed by using ‘t’ test. The major findings of study were: (i) There was significant difference in emotional intelligence of rural boys and girls studying in junior colleges; (ii) there was significant difference in emotional intelligence of Arts and Science stream students; (iii) there was significant difference in emotional intelligence of Commerce and Science stream students; (iv) there was no significant difference in emotional intelligence of urban boys and urban girls; (v) arts and Commerce stream students did not differ from each other with regard to their emotional intelligence.

Khatoon and Humiera (2013) studied emotional intelligence and self-concept as correlates of academic achievement of student-teachers. Two government and two private unaided B.Ed. colleges of Gulbarga district of Karnataka were randomly selected. Self-concept Inventory by Agarwal (2002) and Emotional Intelligence Scale by Pareek and Trivedi (1994) were used for data collection. Academic achievement of students was noted from school records. Mean, percentage analysis and Pearson’s product moment correlation
technique were used for the analysis of data. The ‘t’ test was also employed to study the significance of difference between the mean scores of student-teachers on emotional intelligence, self-concept and academic achievement. The main findings of the study were: (i) Academic achievement was significantly correlated with emotional intelligence and self-concept; (ii) there was significant difference in academic achievement of student-teachers at different levels of emotional intelligence and self-concept; (iii) there was significant main and interactive effect of emotional intelligence and self-concept on academic achievement.

Sabana and Rani (2013) studied the difference in academic achievement of higher secondary school students on the basis of emotional intelligence. The study was conducted on 160 higher secondary school students who were selected by random sampling technique. The data were collected by using Mangal Emotional Intelligence Inventory (2004). The data were analysed by using ‘t'-test. The major findings of the study were: (i) There existed no significant difference in academic achievement of low and high emotionally intelligent students; (ii) there existed no significant difference in academic achievement of students having high and low intra-personal awareness; (iii) there existed significant difference in academic achievement of students having high and low interpersonal awareness; (iv) there existed no significant difference in academic achievement of students having high and low intra-personal management and inter-personal management.

Umadevi (2013) studied the relationship between emotional intelligence of adolescents with selected personal-social variables. The sample comprised of 200 adolescents of which 100 were boys and 100 were girls covering the age range of 15 to 18 years. Emotional Intelligence Inventory developed by the investigator was used. The collected data were analyzed by applying percentage analysis and calculating Pearson’s product moment correlation. The main findings
of study were: (i) Later born adolescents from joint families with large families possessed high emotional intelligence skills; (ii) it was revealed that majority of adolescents come under above average and average emotional intelligence levels; (iii) it was evident that adolescents who were hailing from joint families were highly emotionally intelligent possessing the qualities like; self-regard, independence, interpersonal skills, being empathetic, flexible, and adaptable with high stress tolerance; (iv) adolescents who were from large families were good at adaptability and stress management than adolescents of small families.

2.2 STUDIES RELATED TO ACADEMIC ANXIETY

Rai (1974) examined which of the chosen personality characteristics differentiated between low and high achievers. The chosen characteristics were achievement, anxiety, level of aspiration, need-achievement, and intelligence. The sample of the study consisted of 1000 students of science (biology) group of twelve higher secondary schools of Agra. Out of these students, three achievement groups were formed and matched on the basis of socio-economic status scores. The data were analysed with the help of frequency distribution, ogives, mean, S.D., correlation, t-test, regression and multiple regression. It was found that anxiety as a personality trait had a changing role in scholastic achievement. Low level of anxiety helped in achieving high, whereas; very high level of anxiety was detrimental to achievement. Level of aspiration was not a significant correlate of achievement but it is desirable that students should fix up high goals commensurate with their abilities and should try to achieve them. Low goal setting was in no way a desirable characteristic for better achievement. The n-achievement is a prerequisite for better achievement. It drove the students into academic activities. Intelligence was sine qua non for better achievement and adjustment; anxiety, n-achievement and intelligence were differential personality correlates.
Mehrotra (1986) studied the relationship between intelligence, socio-economic status of the family, personality, adjustment, anxiety and academic achievement of high school students. The sample for the study consisted of 535 class X students. Jalota’s Group General Mental Ability Test (1976) was used for measurement of intelligence. Kuppuswamy’s Socioeconomic Status Scale (1976) was used for assessment of socioeconomic status of the families of the students. Saxena’s Adjustment Inventory (1983) was administered for assessment of the personality adjustment in five areas, viz., home, health, social, emotional and school adjustment. Kumar’s Indian adaptation of Sarason’s General Anxiety Scale (1961) was used for the measurement of anxiety. Marks in the high school examination were taken as the criterion of academic achievement. The main findings of the study were: (i) Both for boys and girls, there was an inverse relationship between level of anxiety and academic achievement; (ii) both for the boys and girls there was a positive relationship between socio-economic status of the family of the students and academic achievement; (iii) there was a positive relationship between intelligence and academic achievement; (iv) there was a positive relationship between level of adjustment and academic achievement; (v) In general, the girls had comparatively higher level of anxiety than the boys.

Handa (1988) conducted a study on academic achievement in relation to level of aspiration, self-concept and test anxiety of high school students. The data were collected from 120 high school students of Chandigarh city. The investigator used test for Level of Aspiration constructed by Shah and Bhargava (1981), Self-Concept Test constructed by Agarwal (1984) and Test Anxiety Scale for Children developed by Sarason (1961). The 2x2x2 factorial design was used for analyzing the data. The main findings of the study were: (i) Level of aspiration is an important variable affecting scholastic achievement of high school students; (ii) higher the self-concept, higher was the academic achievement and low test anxiety was related to high academic achievement; (iii) there was no significant combined
effect of level of aspiration, self-concept and test anxiety on academic achievement of high school students.

Khidtta (1993) attempted to study the test anxiety in boys and girls at high school level in Himachal Pradesh. A representative sample of 882 boys and 858 girls was drawn from 32 government high/senior secondary schools situated in Bilaspur, Hamipur, Mandi, Solan and Shimla districts of Himachal Pradesh. Hindi version of Sarson’s (1960) Test Anxiety Scale for Children by Nijhawan (1972) was used to measure the test anxiety of students. On the basis of analysis and interpretation of data, the following conclusions were drawn: (i) High school boys did not exhibit a significant change in their level of test anxiety from class VI to X; (ii) high school girls did not exhibit a significant change in their level of test anxiety from class VI to class X.

Kibico (1995) investigated motivational effects of anxiety and aspiration in learning situations in which students develop cognitive and intellectual function and their personalities solidify under the guidance of teachers. The sample of the study comprised of 120 (100 males and 20 females) undergraduate, graduate and postgraduate students of Allahabad University, aged between 19 to 27 years. The collected data were analysed by using ANOVA. The major findings of the study were: (i) Low anxiety subjects were better than the high anxiety subjects in performance on Anagram Performance Test; (ii) anxiety and aspirations were found to be negatively correlated.

Trivedi (1995) attempted to study the anxiety level and academic achievement of undergraduate students. The study was conducted on a sample of 270 students selected randomly from five colleges of Kutch district. They were categorised on the basis of sex and streams of study. The tool used for the collection was Comprehensive Anxiety Test constructed and standardized by Sinha (1973). The collected data were treated with mean, S.D., correlation and CR. The main findings of the study were: (i) No significant difference existed between the
means of academic anxiety scores of boys and girls; (ii) Science and commerce streams, as well as science and arts stream students did not differ in respect of their anxiety level; (iii) there had been significant difference between the means of academic anxiety scores of students of commerce and science as well as students of commerce and arts streams; (iv) a negative relationship was found between the anxiety level and academic achievement among girl students of commerce and arts streams but of boys and students of science streams, a positive correlation was found which was very low and not significant.

Verma (1996) attempted to explore the main and interactional effects of test anxiety and study habits on academic achievement of adolescent students in different school courses namely; Hindi, English, Mathematics, General Science and Social Studies. The sample of the study comprised of 500 students studying in class X in secondary schools of Delhi. They were selected through random cluster sampling technique. The tools used to collect data were Test Anxiety Inventory of Sharma and Study Habits Inventory (Hindi version) by Patel. The collected data were treated with mean, SD, and two-way analysis of variance. The major findings of the study were: (i) A significant main effect of test anxiety was revealed on academic performance of the students in English, Mathematics, General Science and Social Science; (ii) students with low test anxiety scored higher in these courses than students with high test anxiety; (iii) as regards interactional effect, there was no significant joint effect of test anxiety and study habits on students' academic performance in Hindi, English, Mathematics, General Science and Social Studies.

Murthy and Kulshreshtha (1999) examined the influence of academic anxiety on academic achievement of students studying in two management schools. The sample for the present study comprised of 199 pupils (100 boys and 99 girls) studying in class IX, belonging to government and public schools of South Delhi who
were drawn randomly. The collected data were analyzed by using mean, standard deviation, correlation coefficient, one-way ANOVA and Duncans' Multiple Range test. The major findings of the study were: (i) Academic anxiety was found to correlate negatively and significantly with academic achievement; (ii) students belonging to different levels of academic anxiety differed significantly in their academic achievement; (iii) boys and girls studying in government and private schools differed significantly on their academic achievement; (iv) students studying in government schools and private schools differed significantly in their academic anxiety favouring private school students.

Ajwani and Sharma (2004) made an attempt to study the test anxiety in relation to academic achievement. The main objective of the study was to study the anxiety of high achievers and low achievers in different testing situations. A sample of 160 college going students was selected, out of which 80 were high academic achievers and 80 were low academic achievers. Data were collected by using Sarason's Anxiety Scale (1961) and academic achievement was measured by marks obtained in annual examination. The 't' test was used to find out the significance of difference between high achievers and low achievers. The results of the study revealed that high academic achievers showed greater anxiety in testing situations as compared to low academic achievers.

Sharma and Kaur (2004) conducted a study to assess the level of test anxiety and sense of humour. The sample consisted of 100 students from arts and science faculties of Punjab University, Chandigarh. Data were collected by using standardized tests viz. Test Anxiety Scale by Brown (2001) and Sense of Humour Scale by Mortain (2000). The 't' test was used to find the significance of difference between scores obtained by the arts and science students and relationship between the two variables was found by computing correlation. The main findings of the study were: (i) Arts and Science
students did not differ significantly in the their level of anxiety; (ii) Arts and Science students possessed average level of sense of humour; (iii) test anxiety was found to be negatively correlated to sense of humour.

Dwivedi and Gunthey (2005) conducted a study to observe the influence of medium of instruction on level of academic anxiety among school students. A sample of 300 students studying in 7th and 8th standard Hindi and English medium schools was selected by incidental purposive sampling technique. All the students were in the age range of 12-14 years. Academic Anxiety Scale for Children (AASC) developed by Singh and Sengupta (1971) was used to collect the requisite data. Mean, S.D. and ‘t’-test were applied for the analysis of data. Results indicated that the medium of instruction has direct influence on academic anxiety. Academic anxiety level of English medium students was significantly greater than the students of Hindi Medium.

Sharma (2005) conducted a study on test anxiety level of rural and urban tenth class students of Himachal Pradesh. A sample of 160 students studying in tenth class was selected randomly. Equal number of boys and girls were taken from government schools by stratified random sampling from the schools of Kullu District of Himachal Pradesh. Hindi version of Sarason (1960) Test Anxiety Scale for Children by Kumar (1972) was used to measure test anxiety of students. Data were analyzed by using the statistical technique of analysis of variance (ANOVA). Following conclusions were drawn: (i) There was significant difference between the test anxiety level of male and female students. The test anxiety level of female students was higher than that of male students; (ii) there was no significant mean difference between the test anxiety level of urban and rural students; (iii) the location of school and sex did not interact significantly in relation to the test anxiety level of students. It indicated that the mean
test anxiety scores of male and female students are independent of the location of school in which they pursue their studies.

Mokashi (2007) attempted to find out the relationship between anxiety and scholastic achievement. Study was conducted on a purposive sample of 330 students (165 boys and 165 girls) from VIII, IX and X standard of two residential schools. Marks obtained in the previous final examination were considered as the scholastic achievement and Cattel’s Anxiety Scale Questionnaire (1963) was used to measure anxiety among students. The results revealed that the respondents were high in their anxiety level and also in their scholastic achievement. Boys were having significantly higher anxiety level while girls were higher in scholastic achievement. The results also revealed that majority of the respondents had developed lack of self-sentiment, ego-weakness, suspiciousness, guilt proneness and frustration tension to the extent of higher level. There was a significant negative relationship between lack of self-development, guilt proneness and overall anxiety with the scholastic achievement of the respondents.

Bhansali and Trivedi (2008) conducted a study on boys and girls of 16-18 years in order to access the difference in academic anxiety prevailing among them. Incidental purposive sampling technique was used. A total sample of 240 adolescents (120 boys and 120 girls) from the different high schools of Jodhpur city was selected. Self-Constructed Adolescents Problem Inventory was pilot tested and applied on the chosen sample. The results revealed that considerable amount of academic anxiety prevailed amongst the sample. It was seen that the girls on the whole had more incidences and intensity of academic anxiety in comparison to boys.

Saikia and Phukon (2009) undertook a study on parental aspiration and anxiety level among higher secondary students. A total of 120 students within the age range of 16-18 years from three co-educational institutions offering higher secondary programme having
either Science, Arts, Commerce or a combination of them were purposively selected as sample from Jorhat town of Assam. One checklist was constructed by the investigator for collection of data regarding parental aspirations. Sinha’s Comprehensive Anxiety Scale (1973) was used to measure the anxiety level of students. The results of the study revealed that: (i) Students belonging to Science stream had high anxiety level in comparison to students of Arts and Commerce stream respectively; (ii) a positive and highly significant correlation between parental aspiration and anxiety level of students was observed which is indicative of the fact that if parental aspiration increases, students’ anxiety also increases; (iii) girls had shown significantly higher mean anxiety scores than boys.

Singaravelu (2009) studied the relationship between test anxiety and academic achievement in Mathematics of high school students in Puduchery. The sample consisted of 300 high school students in which 148 were boys and 152 were girls. Test Anxiety Scale for Children (TASC) by Sarason and associates (1961) was used and the marks obtained by the students in half yearly examination were taken from the school office register and considered as an index of academic achievement. The analysis of data was done by employing mean, S.D., 't' test and correlation coefficient. The major findings of the study were: (i) There was a substantial negative relationship between test anxiety and academic achievement in Mathematics. Higher the test anxiety, lesser is the academic achievement in Mathematics and vice-versa; (ii) it was also found that differences in test anxiety and academic achievement in Mathematics of rural and urban school students were not significant; (iii) on comparing the academic achievement scores of high, average and low test anxiety groups, significant differences existed between low and average test anxiety groups and average and high test anxiety groups. But, high and low test anxiety groups did not differ significantly with respect to their academic achievement; (iv) it was observed that students with average
level of test anxiety achieved more than the students with high and low levels of test anxiety.

Mahmood and Rana (2010) attempted to explore the relationship between test anxiety and academic achievement of students at the post-graduate level. A sample of 414 students was randomly selected from seven different science departments in a public sector university in Lahore. Data were collected by using the Test Anxiety Inventory (TAI) developed by Spielberger (1980). Pearson correlation, multivariate statistics and regression analysis were used for data analysis. It was found that significant negative relationship exists between test anxiety scores and students’ achievement scores. Results showed that a cognitive factor (worry) contributes more in test anxiety than affective factors (emotional). Therefore, it was concluded that test anxiety is one of the factors which is responsible for students’ underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test anxiety.

Parvathamma and Sharanamma (2010) carried out a study on anxiety level and level of self-confidence and their relation with academic achievement. For the study, six high schools of Chamrajnagar Taluka in Karnataka were selected randomly. A total of 300 students were selected randomly. Self-Confidence Checklist developed by Basuvanna (1975) and Anxiety Scale by Shrivastava and Tiwari (1972) were used to collect the requisite data. Academic achievement of students was taken from school records. 't' test was used for determining the significance of differences between the means and Pearson's product moment correlation was applied to find out the relationship between anxiety, self-confidence and academic achievement. The main findings of the study were: (i) Maximum high school students (64.7%) possessed very high level of academic anxiety; (ii) there was significant correlation between anxiety level and academic achievement of students; (iii) there was no significant
relation between self-confidence and level of academic anxiety; (iv) boys and girls differed significantly in their anxiety level; (v) there was significant co-relation between self-confidence and academic achievement; (vi) there was significant difference in the level of self-confidence of boys and girls.

Garg (2011) conducted a study to assess the relationship between life skills and academic anxiety of secondary school children. A sample of 120 students (60 boys and 60 girls) from standards VIII, IX and X was randomly selected from Karnal district of Haryana, which comprised of 60 students from government and 60 students from private schools. In terms of gender, it consisted of 60 boys and 60 girls. Academic Anxiety Scale for Children (AASC) developed by Singh and Sengupta (1984) and Peter Shepherrd’s Online Questionnaire at http://www.trans4mind.com/personality/questionnaire/.htm. were employed to collected requisite data. Mean, S.D. and ‘t’ test were used to assess the significance of differences between boys and girls, and private and government school students with regard to life skills and academic anxiety. Correlation technique was used to assess the significant relationship between life skills and academic anxiety. The main findings of the study were: (i) There was no significant difference in academic anxiety of boys and girls of secondary schools. Though, girls had shown slightly more academic anxiety than boys; (ii) there was no significant difference in academic anxiety of private and government secondary school students. Though, government school students had slightly more academic anxiety than students of private schools; (iii) there was significant relationship between life skills and academic anxiety of secondary school students; (iv) the results clearly revealed that more the life skills, lesser was the academic anxiety.

Kanupriya and Jassal (2011) examined the relationship of parental encouragement, academic performance and academic anxiety among rural adolescents. A total sample of 200 adolescents in the age
range of 13-15 years, from different high and senior secondary schools of Ludhiana district was selected randomly. The investigator used Socio-Economic Status Scale by Bhardwaj (2001), Parental Encouragement Scale by Agarwal (1999) and Academic Anxiety Scale for Children by Singh and Sengupta (1984) for the collection of requisite data. The main findings of the study were: (i) There was significant relationship between academic performance and perceived parental encouragement; (ii) there was significant association between academic performance and academic anxiety among adolescents; (iii) academic anxiety was higher for both the performance categories; (iv) the results of the study indicated significant relationship between perceived parental encouragement and academic anxiety of rural adolescents. Higher the parental encouragement more was the academic anxiety.

Singh (2011) investigated study habits in relation to anxiety and achievement. A sample of 120 post-graduate students of Manipur University was selected randomly. 't'-test was applied for analyzing the data. The main findings of the study were: (i) high, average and low anxiety groups showed significant difference in their means of study habits scores. Average anxiety group possessed significantly better study habits than the high anxiety group as well as low anxiety group; (ii) there was no significant difference in the study habits of high and low anxiety group; (iii) there was significant difference in the study habits of first grade and second grade achievers; (iv) second and third grade achievers did not differ significantly in their study habits; (v) students with average anxiety level showed significantly better study habits than the students with high and very low anxiety level; (vi) students with average anxiety showed better academic performance than the students with low and high anxiety level.

Ali and Zahoor (2012) conducted a study to assess anxiety and psychosomatic problems among university students. The sample of study consisted of 146 students of Aligarh Muslim University. The
participants were 59 male (40.40%) and 87 females (59.6%). A brief questionnaire was developed by the investigator to detect the psychosomatic disorders and the way anxiety is experienced and expressed by the students. Spielberger’s State-Trait Anxiety Inventory (STAI) developed by Spielberger, Wshene, Vogg and Jacobs (1970) was used to assess the students’ general level of anxiety. The analysis of collected data was carried out by using SPSS statistical package version 13.0., Pearson’s correlation (to examine the relationship among anxiety and the most frequent psychosomatic complaints), ‘t’ test was employed for anxiety differences and chi-square was applied for differences in frequencies of psychosomatic symptoms and somatic symptoms of anxiety. The major findings of the study were: (i) The results did not show the existence of significant difference in anxiety levels of males and females; (ii) the females recorded higher in trait anxiety than males; (iii) the most frequent psychosomatic complaints reported by students concerning past were: headache (33.6%), allergy (25.3%), vomiting (19.2%), dermatitis (18.5%), sleep disorders (18.5%), tachy-cardia (16.4%), constipation (13.0%) and regarding the present, the most frequent psychosomatic complaints included; headache (24.4%), dysmenorrhea (21.9%) and allergy (12.3%); (iv) the study also revealed that males and females differed significantly in the level of anxiety; (v) there existed significant difference between males and females in terms of trait anxiety which in turn had a significant correlation with dysmenorrhea.

Neelam and Attri (2013) attempted to find out the academic anxiety and academic achievement of secondary school students. It was hypothesized that there exists a significant difference in academic anxiety and academic achievement of male and female secondary school students. For verification of these hypotheses, the data were collected from 200 secondary school students of Mandi district of Himachal Pradesh selected by random sampling method and administering ‘Academic Anxiety Scale for Children (AASC) by Sinha (1984). The marks of class 9th were taken as academic achievement.
The findings of the study revealed that there existed significant differences in academic anxiety and academic achievement of male and female secondary school students. Girls were found to be more academically anxious and had better academic achievement than boys.

Pandian (2013) conducted a research to know the adjustment and anxiety level of B.Ed. students in Puducherry. The sample of the study was comprised of 486 B.Ed. students from Puducherry region. The students were selected by using simple random sampling technique. Adjustment Inventory standardized by Srivastava and Tiwari (1972) and Anxiety Scale standardized by Taylor (1964) were used to collect the requisite data. Mean, standard deviation, ‘t’-test were applied for the analysis of data. The major findings of the study were: (i) There was significant difference in the adjustment level of B.Ed. students belonging to BC, SC and ST communities; (ii) there was significant difference in anxiety level of BC and SC, ST and MBC and SC and ST communities among the B.Ed. student-teachers.

2.3 STUDIES RELATED TO ACADEMIC ACHIEVEMENT

Patel (1996) examined the study habits of pupils and its impact upon their academic achievement. The sample of study comprised 578 pupils of standard VIII of urban and rural settings of Khera district (Gujarat). The tools used for data collection were Study Habit Inventory of Patel (1985) and General Ability Test by Patel (1986). Academic achievement was recorded from annual results from school records. The collected data were treated with mean, ANOVA and Newman Keul’s Sequential Range Test. The findings of the study were: (i) Academic achievement scores of pupils having high and low general ability differed significantly from each other; (ii) sex and study habits interacted significantly in relation to academic achievement; (iii) study habits affected the academic achievement of students significantly.

Mavi and Patel (1997) conducted a study on academic achievement in relation to selected personality variables of tribal
adolescents. The sample of the study comprised 720 students of grade 9 belonging to age group 14-15 years. They were selected randomly from secondary schools located in Sundergarh district of Orissa. Adjustment Inventory by Reddy (1995), Raven’s Standard Progressive Matrices (1956), Level of Aspiration Scale by Patel (1985) and Self-Concept Scale by Deo (1985) were used to collect the data. Class VIII scores of selected students were considered for academic achievement. The collected data were analysed by using mean, S.D., product-moment correlation, multiple correlation, multiple regression analysis and critical rations. The major findings of the study were: (i) There was no significant positive correlation between academic achievement and personality adjustment, intelligence, self-concept and level of aspiration of grade IX students; (ii) tribal male and female students did not differ significantly from each other in their academic achievement; (iii) high and low achieving tribal students did not differ significantly in relation to their personality adjustment and intelligence; (iv) high and low achieving tribal students did not differ significantly in their self-concept and level of aspiration.

Sharma (2001) conducted a study on academic achievement of OBC, SC and general category students in relation to certain socio-psychological variables. The sample comprised of 200 OBC, 200 SC and 200 general category students of Bilaspur, Hamirpur and Mandi districts of Himachal Pradesh studying in Xth grade. Home Environment Inventory (HEI) by Mishra (1989), Raven’s Standard Progressive Matrices by Raven and Raven (1956), Achievement Motivation Inventory (AMI) by Gandhi and Agnihotri (1974) and Agnihotri’s Self-Confidence Inventory (1987) were used for the collection of requisite data. Data were analysed by using statistical technique of Analysis of Variance. The main findings of the study were: (i) The groups of students belonging to OBC, SC and general category differed significantly in their academic achievement; (ii) the students belonging to SC category exhibited higher level of academic achievement as compared to the students belonging to OBC; (iii) the
general category students have exhibited higher level of academic achievement than the students belonging to OBC; (iv) the students belonging to SC and general category exhibited more or less same level of academic achievement.

Panda (2005) studied the relationship of intelligence with academic achievement of class IX students. The objective of the study was to discover the effect of intelligence on academic achievement in different categories of schools and assess inter-relationship between academic achievement and intelligence. A sample of 550 students of class IX of different categories of schools in the district of Dhenkanal (Orissa) was taken on the basis of random sampling technique. The summative scores of selected students from the last examination were recorded from office records and Non-Verbal Standardized Group Test of Intelligence developed by Raven and Raven (1956) was used for measuring intelligence. The data were analyzed by employing ‘t’ ratios. The major findings of the study were: (i) there was significant difference in academic achievement of students studying in different categories of schools; (ii) there was no significant difference in intelligence of students studying in different categories of school; (iii) there was low relationship between academic achievement and intelligence of students studying in different categories of schools; (iv) there was little significant relationship between academic achievement and intelligence in schools of Dhankanal district.

Anand (2006) conducted a study on academic achievement and achievement motivation of high school students in relation to certain socio-demographic variables. A sample of 300 students studying in 9th grade was selected randomly from Kullu and Manali Tehsils of Kullu district. For measuring the achievement motivation level of class 9th students, ‘Achievement Motivation Inventory’ (1969) by Prayag Mehta was used. The data were analysed by employing ‘t’ test and Analysis of variance (one way). The main findings of the study were; (i) The girls exhibited significantly higher mean of academic achievement scores
than boys; (ii) the high school students belonging to different social categories i.e. scheduled caste, scheduled tribe and general categories did not differ significantly from each other with respect to their mean achievement motivation scores; (iii) gender and social category did not interact significantly with respect to their combined influence on achievement motivation.

Saha (2007) undertook a study on academic achievement in Mathematics in relation to cognitive style and attitude towards Mathematics among primary school students. A sample of 200 subjects was taken randomly from 6 govt. aided Bengali medium primary schools which included boys and girls studying in class IV. Three instruments namely; Academic Achievement Test in Mathematics (AATM) by Saha (1998), Children’s Embedded Figure Test (CEFT) by Karp (1971) and Scale for Measuring Attitude towards Mathematics (SMAM) by Saha et. al. (2004) were used to collect the requisite data. The main findings of the study were: (i) Boys differed significantly from girls on all the three measures under consideration i.e. academic achievement, cognitive style and attitude towards Mathematics. Boys performed significantly better than girls on all the variables; (ii) boys showed more favourable attitude towards Mathematics than girls.

Dhall and Thukral (2009) made an attempt to reveal the relationship of intelligence with self-confidence and academic achievement of secondary school students. The sample of study consisted of 1000 students of ninth class drawn from government and government-aided schools of four districts of Punjab i.e. Amritsar, Jalandhar, Ludhiana and Bathinda. Group Test of General Mental Ability developed by Tandon (1972) and Self-Confidence Inventory by Agnihotri (1987) was used for data collection. Academic achievement was measured from the results of eighth class annual examination of students conducted by P.S.E.B for the session 2004-2005. The main findings of the study were: (i) There existed significant and positive
relationship between self-confidence and intelligence among secondary school students; (ii) there was significant positive relationship between intelligence and self-confidence of girls of secondary schools; (iii) there was no significant relationship between intelligence and self-confidence among boys; (iv) there was a significant relationship between academic achievement and intelligence of secondary school students; (v) there existed significant relationship between academic achievement and intelligence of secondary school boys; (vi) there existed significant and positive relationship between academic achievement and intelligence of secondary school girls; (vii) There existed significant difference between secondary school boys and girls in terms of their academic achievement.

Isabella (2010) explored the relationship between academic achievement and socio economic status of the B.Ed. student teachers of Lady Willingdon Institute of Advanced Study in Education. The sample consisted of randomly selected 158 student teachers. Out of 158 student teachers, 47 belong to low socio economic status, 97 from middle socio-economic status and 14 from high socio-economic status. The modified Kuppuswamy’s Socio-Economic Status Scale (1999) was used to collect the requisite data. For academic achievement, the percentage of the total marks scored by the student teachers in their university examination was taken into account. The data collected were subjected to statistical analysis namely; mean, standard deviation, t-test and co-efficient of correlation. The findings of the study were: (i) There was no significant relationship between academic achievement of student teachers coming from high, middle and low socio-economic status; (ii) socio-economic status was not found to be an influencing factor in academic achievement of B.Ed. student teachers.

Naik and Fransis (2010) conducted a study on academic achievement of secondary school students in relation to their sex,
intelligence and academic motivation. A sample of 250 students was selected from Kurukshetra district of Haryana studying in class 10th. Hindi version of General Mental Ability test developed by Jalota (1976) and Hindi-version of Academic Motivation Inventory developed and standardized by Sharma and Singh (1988) were employed for collecting the requisite data. Data were analysed by using percentile rank and three–way analysis of variance. The findings of the study were: (i) There was significant effect of sex on academic achievement of secondary school students; (ii) there existed significant effect of intelligence on academic achievement of secondary school students; (iii) the interactive effect of sex and intelligence on academic achievement of the secondary school students was not found to be significant; (iv) the interactive effect of intelligence and academic motivation on academic achievement of secondary school students was not found to be significant; (v) there existed significant interactive effect of sex, intelligence and achievement motivation on academic achievement of the secondary school students.

Nikose (2010) conducted a study to find out the extent of relationship between mental health, intelligence and academic achievement. The study was carried out on a sample of 300 tribal students from the secondary schools of urban and rural regions of Gondia district of Maharashtra state. The sample was selected using proportionate stratified sampling technique. Mithila Mental Health Status Inventory by Kumar and Thakur (1984) and P.S.M. Intelligence Test by group of Educational Psychologists of Sandarchan College, Jabalpur were used for the collection of requisite data. For measuring academic achievement, the aggregate marks of annual examination of preceding year were noted from the office records. Different statistical techniques, viz. mean, standard deviation, coefficient of correlation and t-test were used for the analysis of data. The major findings of the study were: (i) There is a significant relationship between mental health and academic achievement of the tribal students; (ii) there is a significant relationship between intelligence and academic
achievement of the tribal students; (iii) there is a significant difference in the mean scores of intelligence of tribal boys and girls of secondary schools; (iv) there is a significant difference in the means of intelligence scores of urban and rural tribal students of secondary schools; (v) there is no significant difference in mean academic achievement scores of tribal boys and girls.

Vijayakumari (2010) explored the relationship of academic anxiety and achievement motivation with academic achievement. The study was conducted on a sample of 400 students of standard IX selected through stratified sampling technique from various schools of Kerala state. Scale of Academic Anxiety constructed and standardized by Vijayakumari and Archana (2006) was used. Achievement motivation was measured by using Pillai and Salimkumar’s (1994) Scale of Achievement Motivation. The marks obtained in previous class end-term examination were considered as academic achievement of students. Pearson’s product moment coefficient of correlation and three way ANOVA (3X3X2) was used to analyze the data. The major findings of the study were: (i) There existed a low, negative relationship between academic achievement and academic anxiety; (ii) academic achievement and achievement motivation were positively related but the relationship was low; (iii) there existed significant difference in academic achievement of boys and girls with high, average and low academic anxiety and among students with high, average and low achievement motivation; (iv) academic achievement differed significantly among boys and girls with high, average and low academic anxiety; (v) academic achievement of boys and girls differed significantly at different levels of achievement motivation viz., high, average and low; (vi) academic anxiety did not influence academic achievement significantly at different levels of achievement motivation; (vii) sex, academic anxiety and achievement motivation taken together do not interact significantly with respect to academic achievement.
Devaki and Pushpam (2011) conducted a study to assess metacognitive ability of XI standard students and its association with academic achievement in Chemistry. A sample of 244 students of XI standard belonging to Science group from Coimbatore district was selected. Metacognitive Inventory constructed and standardized by Shraw and Dennison (1994) was used for the collection of requisite data. For analyzing the data, correlation, t-test and ANOVA were used. The major findings of the study were: (i) There was significant positive association between metacognitive ability and academic achievement in Chemistry; (ii) there was significant difference in the metacognitive ability of boys and girls; (iii) there was no significant difference in academic achievement of boys and girls.

Mahajan (2011) designed a study to investigate academic achievement in relation to emotional intelligence and spiritual intelligence. A sample of 140 students studying in class XI from four schools of Hoshiarpur was taken by adopting the multistage random sampling technique. Seven-Fold Emotional Intelligence Scale ‘SFEIS’ by Khera, Ahuja and Sarabjit (2001) and Six-Fold Spiritual Intelligence Scale “SFSIS” by Khera and Amandeep (2002) were used for the collection of data. Bivariate coefficient of correlation was used to study the relationship between emotional intelligence, academic achievement and spiritual intelligence. The ‘t’ ratio was worked out to study the difference between the boys and girls on emotional intelligence and spiritual intelligence. The main findings of the study were: (i) There exists no significant difference between emotional intelligence of boys and girls; (ii) there exists no significant difference between spiritual intelligence of boys and girls; (iii) there exists positive and significant relationship between emotional intelligence and academic achievement of boys and girls. Also, the relationship was found positive and significant for boys and girls separately; (iv) there exists positive and significant relationship between emotional intelligence and spiritual intelligence of boys and girls.
Mary and Samuel (2011) studied the attitude of B.Ed. students towards teaching and their academic achievement. A sample of 336 B.Ed. student-teachers was selected from the five Colleges of Education in Chennai by applying stratified random sampling technique. For collecting the data, the investigator used Performa and Attitude towards Teaching Scale. Descriptive analysis (mean and standard deviation) and inferential analysis (t-test, one way ANOVA and correlation) were used for the analysis of the data. The major findings of study were: (i) Female student teachers have more favourable attitude towards teaching (158.37) than their male counterparts (156.61); (ii) male and female student teachers differed significantly with regard to the variables of attitude towards teaching and academic achievement; (iii) there existed no significant difference between the student-teachers whose qualification is UG (157.92) and PG (157.38) with regard to their academic achievement.

Singh and Pannu (2011) examined the influence of various types of adjustment on academic achievement of adolescent students in relation to their gender. The study was conducted on a sample of 1246 students of 10th class from senior secondary schools of Amritsar district. The sample consisted of males (585), females (661); adolescents residing in rural (674) and urban (572) areas; adolescents studying in government (397), govt. aided (434) and private (415) schools. The sample was selected through cluster sampling technique. The age-range of the adolescents was between 15 to 18 years. Descriptive survey method of research was employed. Bell’s Adjustment Inventory (1934) was used to collect the requisite data. Data from students were collected at the terminal stage of the academic session 2007-08. Two-way ANOVA was used to analyze the data. The main findings of the study were: (i) The mean academic achievement score of male and female adolescents differed significantly. The mean academic achievement score of females (63.11) was significantly higher than males (61.97); (ii) the mean academic achievement scores of adolescents having different levels of home
adjustment differed significantly; (iii) adolescents with good level of home adjustment possessed higher academic achievement than those having average, unsatisfactory and very unsatisfactory level of home adjustment; (iv) male and female adolescents having different levels of home adjustment possessed same level of academic achievement; (v) male and female adolescents having different levels of health adjustment possessed same level of academic achievement; (vi) mean scores of academic achievement of adolescents having different levels of social adjustment did not differ significantly and social adjustment did not influence the academic achievement of adolescents; (vii) male and female adolescents having different levels of social adjustment possessed different levels of academic achievement; (viii) the mean scores of academic achievement of adolescents having different levels of emotional adjustment differed significantly; (ix) adolescents having good level of emotional adjustment possessed higher academic achievement than those having average, unsatisfactory and very unsatisfactory level of emotional adjustment; (x) male and female adolescents having different levels of emotional adjustment possessed same level of academic achievement.

Shelly (2011) conducted a study aimed at examining the relationship among personality traits, approaches to learning, study skills and academic achievement of Pharmacy students. A representative sample of 600 students (365 males and 235 females) was drawn on random basis from Pharmacy students of Punjab. The research tools used for the collection of requisite data were International Personality Item Pool (IPIP) developed by Goldberg (1999) and Approaches and Study Skills Inventory for students developed by Entwistle, Enwistle, Trait and McCune (2000). The major findings of the study were: (i) Academic achievement is negatively and significantly related with surface approach, whereas, it is positively and significantly related with deep approach and strategic approaches to learning; (ii) significant positive relationships were observed between the intellect and the deep approach and between
conscientiousness and the strategic approach; (iii) a significant relationship between emotional stability and the surface approach was also found; (iv) achievement is the positive and significant predictor of deep learning approach and strategic learning approach while achievement is the negative and significant contributor to surface learning approach among professional students pursuing their studies in Pharmacy college.

Gupta and Sharma (2012) made an attempt to study the academic performance of undergraduate students in relation to their emotional intelligence. The study was conducted by using a quantitative survey research design. The sample for the study consisted of 420 students studying in undergraduate courses of Himachal Pradesh University in three streams namely; Science, Arts and Commerce. Out of 420 students, 210 were males and 210 were females. Out of 140 students of each stream, 70 were males and 70 were females. Stratified random sampling technique was used to draw out sample from the population. The researcher used biographical information sheet for collecting general information and data regarding academic performance of students and Schutte Self Report Inventory. Two-way ANOVA was employed to analyze the collected data. The main findings of the study were: (i) There was significant difference between emotional intelligence scores of undergraduate students grouped into different academic streams. The students from Science stream scored maximum (123.89) followed by Commerce (119.06) and Arts (114.09) students respectively; (ii) there was significant interaction between genders and academic stream with regard to various dimensions of emotional intelligence; (iii) there was no significant difference between the academic achievement scores of undergraduate emotionally better students grouped into three academic streams of Science, Commerce and Arts; (iv) there was significant difference between the academic achievement scores of emotionally poor undergraduate students on the basis of their streams of study; (v) there was no significant gender-wise difference in
academic achievement scores of emotionally better undergraduate students. The mean scores of achievement for males was greater than females which signify that males were better on academic achievement as compared to their female counterparts; (vi) there was significant difference between academic achievement scores of emotionally poor male and female undergraduate students. The emotionally poor female undergraduates were better on academic achievement scores as compared to their male counterparts.

Hassan and Rao (2012) investigated the relationship between study habits, socio-economic status and academic achievement of class X students. The main objective of the study was to explore the gender–wise difference in study habits, academic achievement and socio-economic status-wise difference in academic achievement of students. The study was conducted on the sample of class 10\textsuperscript{th} pupils studying in selected schools. The socio-economic status inventory developed by Kuppuswami (1976) and educational achievement test by Bell (1971) were used to collect the requisite data. The major findings of the study were: (i) There was no significant difference between male and female, OC and SC community students, BC and SC community students in study habits; (ii) there was no significant difference between male and female, OC and BC community students in their academic achievement; (iii) there was no significant difference between lower and upper class students in their academic achievement.

Pannu (2012) examined the influence of various factors of personality on academic achievement of adolescent students. The main purpose of the investigation was to study the influence of type of school, personality factor and their interaction on academic achievement of adolescents. The study was conducted on a sample of 1246 students of 10+1 from senior secondary schools of Amritsar district. The sample consisted of males (585), females (661) adolescents studying in government (397), government-aided (434)
and private (415) schools. The sample was selected through cluster sampling technique. The age-range of the adolescents was between 15 to 18 years. Descriptive survey method of research was employed. High School Personality Questionnaire (H.S.P.Q) developed by Cattell and Cattell (1999) was used to assess the personality factors of adolescents. The scores in final examination of previous class (10th) were taken as academic achievement of the students. The data was analyzed by using two-way ANOVA. The main findings of the study were: (i) There was no significant interaction between type of school and 14 personality factors A (Reserved/ warmhearted), C (affected by feeling/emotionally stable), D (Undemonstrative/Excitable), E (obedient/Assertive), F (Sober/Enthusiastic), G (Disregards rules/conscientious), H (Shy/Adventurous), I (Tough minded/tender minded), J (zestful/circumspect individualism), O (Self Assured/Apprehensive), Q3 (uncontrolled/controlled), Q4 (Relaxed/Tense) with respect to academic achievement of adolescents; (ii) there was found significant interaction between type of school and personality factors B (less intelligent/more intelligent) and type of school with Q2 (Socially group dependent/self-sufficient) with respect to academic achievement of students.

Parveen, Syed and Syed (2012) studied the gender differences in academic performance among high school students of district Pulwama of Jammu and Kashmir. A sample of 300 students i.e. 150 boys and 150 girls studying in 10th class were drawn randomly from 26 institutions of district Pulwama of Jammu and Kashmir. The investigator collected the data for ascertaining the academic achievement of students from school records by recording their subject-wise and aggregate marks obtained in 10th class. The data were subjected to statistical analysis by computing mean, S.D. and test of significance. The main findings of the study were; (i) The boys possessed high academic achievement than girls in general English; (ii) there was no significant difference in academic achievement of boys and girls in Urdu; (iii) there was no significant difference between
academic achievement of boys and girls in Mathematics; (vi) there was no significant difference between academic achievement of boys and girls in general Science; (v) boys possessed high academic achievement than girls in Social Science; (vi) boys possessed high aggregate academic achievement than girls.

Sood (2012) carried out a study to investigate the metacognition, academic achievement of undergraduate college students in relation to their locus of control. For collecting requisite data, a representative sample of 200 undergraduate students (100 boys and 100 girls) studying in second year of B.A./B.Sc./ B.Com. classes was drawn from four government degree colleges of Mandi, Kullu and Bilaspur districts of Himachal Pradesh by applying purposive sampling technique. Meta cognition inventory (MCI) developed by Govil (2003) and locus of control scale (LCS) by Hasmain and Joshi (1992) were used to collect the data. The marks obtained by second year B.A./B.Sc/B. Com college students in previous class (i.e. first year of three years degree course) was taken as academic achievement of undergraduate college students. To analyze the data, ‘t’ test- was applied. The main findings of the study were: (i) The students with internal locus of control were significantly better in metacognition as compared to the students with external locus of control; (ii) the students with higher meta-cognitive skills and internal locus of control have reflected significantly higher academic achievement as compared to the students with poor meta-cognitive skills and external locus of control respectively.

Bhadoria and Bhadoria (2013) undertook a study to find out the impact of home and school environment on the academic achievement of young adolescents. The study was conducted on 100 students (50 male and 50 female) of class 9th and 10th standard from different schools of Jhansi district. The sample of the study belonged to age range of 13 to 15 years. The study was conducted by using Family Environment Scale developed by Moos (1986), School Environment
Inventory developed by Mishra (1984), Achievement Motivation Scale by Deo and Mohan (1985) and Academic Anxiety Scale by Pal, Mishra and Pandey (1985). The collected data were analyzed in three ways i.e. descriptive analysis, correlation analysis and regression analysis. The findings of the study revealed that: (i) Academic anxiety was found to have significant negative relationship with cohesion, independence, intellectual culture orientation, active recreational orientation, moral religious emphasis and control followed by independence and active recreational orientation; (ii) academic achievement was found to have significant positive relationship with cohesion, expressiveness, independence achievement orientation, intellectual culture orientation, moral religious emphasis organization and control; (iii) majority of the coefficients of correlation of each sub-scale of home environment with achievement motivation, academic anxiety and academic achievement were observed significant.

Bhagabati and Devi (2013) undertook a study to find out the impact of socio-economic status on academic achievement of urban and rural children with special needs. A sample of 920 special needs children and their parents were involved in the study. The sample consisted of 480 urban and 440 rural children. Socio-Economic Status Scale developed by Singh, Shyam and Kumar (2006) was used for the collection of data. Grades obtained by students in the assessment during the previous academic session were considered as academic achievement of students. The main findings of the study were: (i) There was positive relationship between socio-economic status and academic achievement of special needs children belonging to rural areas; (ii) academic achievement and socioeconomic status of special needs children of urban areas were negatively correlated; (iii) there was no significant difference in academic achievement of students belonging to rural and urban areas.
2.4 STUDIES RELATED TO STYLES OF LEARNING AND THINKING

Monfort (1990) reported that students majoring in accounting, management, finance, computer science, nursing, criminal justice and elementary education scored high on left hemispheric style of thinking. Conversely, students who are majoring in interior design, music, journalism, art and architecture had higher scores in right hemispheric style of thinking. No significant difference was found in the styles of thinking of male and females.

Verma (1994) studied the hemisphericity and learning styles among students of distance education. The main objective of the study was to study the differences in hemispheric preferences and learning style of students of distance education based on their sex and area of residence. The sample of the study comprised of 80 male and female subjects of M.Ed. second semester studying through distance education in Himachal Pradesh University, Shimla. The sample was selected by employing random selection method. The tool used to collect data included Your Style of Learning and Thinking developed by Torrance, Reyonlds, Riegel and Ball (1977) and the Inventory of Learning Process developed and standardized by Schmeck et al (1982). The collected data were treated with mean, S.D. and 't' test. The major findings of the study were: (i) No significant difference existed in learning styles of male and female students; (ii) the boys were in favour of left hemisphericity than their female counterparts; (iii) rural and urban students did not demonstrate any significant difference with regard to their preference for left, right and whole brain processing; (iv) students with rural and urban residential backgrounds did not differ significantly with regard to their learning styles.

Rujuta and Kadlaskar (1995) conducted a study on brain preference of the adolescent girl students in relation of giftedness and behavioural intelligence. The sample was comprised of 170 girls from
VIII standard who were selected from the school for gifted (school-A) and two schools for unselected (schools-B and C). There were 48 girls from school B and 86 girls from school C. They were further divided into two groups. Tools used in the study were Brain Preference Inventories, Behavioural Ability Tests and Raven’s Standard Progressive Matrices (1956). Mean, S.D., correlation and factor analysis were used for the analysis of data. The major findings of the study were: (i) There was significant correlation in the brain preference of girls selected from school B and C. The group B girls preferred to use right hemispheric and integrated abilities whereas; the Group C girls preferred to use left hemispheric abilities; (ii) there was a significant correlation between the variable of brain preference and behavioural convergent production; (iii) the girls from the school for gifted showed significantly high right hemispheric abilities and integration of bihemispheric abilities, whereas girls from unselected schools (B and C) showed preference to left hemispheric abilities significantly.

Grigorenko and Sternberg (1997) studied the relationship of styles of thinking abilities and academic performance. Participants were high school students, ranging in age from 13 to 16 yrs. The results of the study showed that after controlling for levels of abilities, styles of thinking contribute to prediction of academic performance. The correlation pattern suggested that judicial and executive style showed significant associations with academic performance. It was found that students’ styles of thinking did not vary across sex variable. Both male and female students had almost similar thinking styles.

Salesh (1997) reported that there was significant relationship between brain hemispheric style and academic achievement. Students majoring in business, science and engineering field tended to possess left hemispheric style of thinking whereas, students majoring in arts, literature, education, nursing, law and communication field tended to
possess right brain dominant styles. Male learned more due to left brain dominating style of thinking than females. Also, it was revealed that students of natural sciences and technological subjects had more global thinking style than those in areas of social science and humanities.

Zhang and Sternberg (1998) conducted a study to explore the relationship of thinking style abilities, and academic achievement among Hong-Kong university students. The data included the participants’ university entrance examination test scores as well as their self-rated analytical, creative and practical ability levels. The data analysis revealed that the thinking styles that tended to be positively associated with higher achievement were conservative, hierarchical and internal. But legislative, liberal and external thinking styles tended to be negatively associated with students’ academic achievement. It was also noted that global thinking style was significantly and positively associated with academic scores whereas; the local thinking style was significantly and negatively associated with academic achievement scores. Multiple regression analysis showed that thinking styles served as predictors of academic achievement over and above abilities.

Francisco and Hughes (2000) examined whether college students' learning styles (LS) and thinking styles (TS) were inter-related and if these could predict academic achievement. A total of 210 college students (two classes from the first year of a psychology degree) attending a state university in the South-West of Spain served as participants for the study. These 210 students were sampled randomly. Women constituted 80% (N=168) of the sample and men constituted 20% (N=42). The age range of sampled subjects was 18-24 years. The Learning Styles Inventory in its normative-semantic version Learning Style Questionnaire (LSQ) developed by Marshall and Merrit (1986) and The MSG Thinking Styles Inventory developed by Sternberg and Wagner (1991) were employed. The results of canonical
correlation analysis revealed that there was a moderate relationship between learning style and thinking style. The results of regression analysis indicated that students' academic achievement was related to students' thinking styles.

Sundaram and Kumar (2000) found that there was association between hemisphericity and sex of students at higher secondary level. Girls were right hemispheric dominated (boys 28.78%, and girls 71.21%) and boys were left hemispheric dominant (boys 51.26% and girls 48.73%). Also, it was revealed that urban students had more inclination towards right hemispheric thinking style and rural students were found to possess left hemispheric thinking style.

Jain (2001) conducted a study on style of learning and thinking of secondary school students in relation to their sex and academic stream. The sample consisted of 250 students selected by adopting random cluster sampling technique but analysis of data was done for 190 students (whose SOLAT questionnaire were found to be complete) from Agra and Rae Barely districts of Uttar Pradesh. For achieving the objectives of the study, Style of Learning and Thinking Tool by Venakataraman (1994) was used to collect the requisite data. The 't' ratios were calculated for style of learning and thinking of senior secondary students with reference to sex and academic streams. Following conclusions were drawn on the basis of analysis and interpretation of the data: (i) Boys and girls studying at senior secondary level have no difference in their style of learning and thinking when measured on R-hemisphericity and L-hemisphericity; (ii) boys and girls studying at senior secondary level have significant difference in their style of learning and thinking when measured on W-hemisphericity; (iii) there is significant difference in the styles of learning and thinking of boys and girls of science stream studying at +2 level as measured by R-scale of hemisphericity; (iv) there is no significant difference in the style of learning and thinking of boys and girls of science stream studying at +2 level as measured by L-scale.
and W-scale of hemisphericity; (v) there is no significant difference in the style of learning and thinking of boys and girls of commerce stream studying at +2 level as measured by R-scale, L-scale and W-scale of hemisphericity; (vi) there is no significant difference in the style of learning and thinking of science and commerce students studying at +2 level as measured by R-scale, L-scale and W-scale of hemisphericity.

Bernardo, Zhang and Callueng (2002) studied the thinking style and academic achievement among Filipino students with the objective to determine whether the precepts of Sternberg's theory of mental self-government apply to non-Western culture. They administered Sternberg and Wagner's thinking styles inventory (1992) which is based on the theory of mental self-government. The results of item analysis, scale inter-correlations and factor analysis were consistent with the general provisions of the theory. Correlation analysis between thinking styles and grade point average showed that thinking styles are related to academic achievement of university students.

Sharma (2002) reported that introvert students were more brained towards left hemispheric thinking style than extrovert students. Neurotic and stable students did not show any significant difference in their thinking styles. Students with high and low levels of intrinsic motivation and extrinsic motivation also did not differ significantly on their thinking styles.

Rani (2003) conducted a study to examine the relationship among styles of learning and thinking, intelligence and academic achievement of high school students. A sample of 100 students studying in IX class was taken from four English medium schools of Ambala city through simple random sampling. Style of learning and thinking by Torrance, McCarthy and Kolensinsk (1994) and Group Test of General Mental Ability by Jalota (1976) were used to collect the data. Achievement scores in house examination of the high school
students were taken as academic achievement of students. Product moment correlation (r) and multiple correlation (R) were computed to analyze the data. The main findings of the study were: (i) There was no significant relationship between style of learning and thinking and intelligence of high school students. But, it has been observed that left brain style of learning and thinking has higher correlation with intelligence in comparison to right brain or whole brain area; (ii) there was no significant relationship between left brain style of learning and thinking and academic achievement of high school students; (iii) there was significant relationship between right brain and whole brain areas of styles of learning and thinking with academic achievement; (iv) there was significant relationship between intelligence and academic achievement of high school students; (v) there was no significant relationship among left brain style of learning and thinking, intelligence and academic achievement of high school students; (vi) there was significant relationship among right and whole brain areas of styles of learning and thinking, intelligence and academic achievement of high school students.

Sood (2003) undertook a study on thinking styles of creative students across gender, stream and school location. The sample of the study comprised of 345 students of +2 class, studying in 8 government senior secondary schools of Dharamshala (H.P.). The sample was selected through random sampling method. For measuring creative thinking, 'Verbal Test of Creative Thinking' by Mehdi (1973) and Thinking Styles Inventory (TSI) by Sternberg and Wagnor (1992) were used for collecting requisite data. In order to analyze the data, two-way analysis of variance (ANOVA) technique was applied. The following conclusions were drawn: (i) There were significant differences in legislative and liberal thinking styles among average and low creative students. However, there was no significant difference between average creative and low creative students in other thinking styles; (ii) creative male and female students differed significantly with reference to executive, liberal, oligarchic, anarchic
and external thinking styles; (iii) there was no interaction between creativity and gender with reference to executive, liberal, oligarchic, anarchic and external thinking styles; (iv) creative students belonging to science and arts streams of study differed significantly on monarchic and external thinking styles; (v) there was significant interaction between creativity and stream of studies with reference to executive, liberal, oligarchic, anarchic and external thinking style.

Vandana (2004) carried out a study of emotional intelligence, critical thinking, personality types and learning styles of prospective secondary teachers. The study was carried out on a sample of 251 prospective teachers (162 science and 89 arts stream) drawn from the department of education, Himachal Pradesh University and two private B.Ed. colleges affiliated to H.P. University, Shimla through cluster sampling technique. The collection of requisite data was done by Emotional Intelligence Scale developed by Kumar and Ram (2001), Critical Thinking Questionnaire by Pintrich et al. (1991), Psychological Type Index by Garsha (1975) and Index of Learning Style (ILS) by Soloman and Felder (1993). In order to analyze the data, 't' test was applied. Following conclusions were drawn: (i) Male and female prospective secondary teachers did not exhibit any significant difference in their emotional intelligence; (ii) no significant difference was found between male and female prospective teachers on critical thinking; (iii) no significant difference was found between male and female groups with reference to active, reflective, sensing, intuition, visual, verbal, sequential and global learning styles; (iv) general caste, ST and SC prospective teachers did not exhibit any significant difference on emotional intelligence; (v) no significant difference was found between general caste, ST and SC prospective teachers on critical thinking; (vi) general caste, ST and SC prospective teachers did not differ significantly on active, reflective, visual, verbal sequential and global learning styles. However, general caste and ST prospective teachers exhibit significant difference on two learning styles namely; sensing and intuition. ST prospective teachers were found to be higher
on sensing learning styles whereas; general caste prospective teachers were found to be higher on intuitive learning styles; (vii) low emotional intelligence prospective teachers had higher level of reflective, intuitive and verbal learning styles than high emotional intelligence prospective teachers; (viii) high critical thinking prospective teachers tend to use active and sequential learning styles more than low critical thinking prospective teachers and low critical thinking prospective teachers tend to employ verbal learning style more than high critical thinking prospective teachers.

Zhang (2004) undertook a study on university students thinking styles and their conceptions of effective teachers. Thinking Style Inventory and Effective Teachers’ Inventory were used in the study. The results indicated that even after age, gender, academic discipline were controlled, particular thinking styles predisposed students to own thinking styles. Results also indicated that students’ thinking styles made a difference in their conceptions of effective teachers.

Attri (2005) conducted a study on self-efficacy, thinking and decision making styles of prospective teachers in relation to gender and academic achievement. The study was conducted on a sample of 501 secondary prospective teachers which were selected from eight private B.Ed. institutions of Himachal Pradesh. Keeping in view the variables of the study, Hindi version of 'General Self-Efficacy Scale' by Schwarzer (1995), 'Thinking Styles Inventory' by Sternberg and Wagner (1992) and 'General Decision-Making Style Scale' by Scott and Bruce (1995) were used. Two-way ANOVA and ‘t’ test were used for the analysis of data. The major findings were: (i) Male prospective teachers had stronger preference for judicial thinking style and internal thinking style whereas, female prospective teachers had stronger preference for executive, local and internal thinking styles; (ii) no significant gender differences emerged among prospective teachers with reference to legislative, global, local, liberal, conservative,
Kumari (2005) conducted a study on learning styles of gifted high school students across gender, school location, locus of control and self-esteem. An initial sample of 1359 high school students studying in class 10th was drawn from 20 selected schools of different districts of Himachal Pradesh. The Group General Mental Ability Test (Revised.) by Jalota (1972), Learning Style Inventory Hindi version developed by Agarwal (1983) and Locus of Control Scale by Rotter (Hindi version developed by Kumar and Srivastava (1985) were used for collecting the requisite data. For the analysis of collected data, non-parametric test i.e. chi-square was used. The following conclusions were drawn from the findings of the study: (i) There was no significant difference in the learning style preference of gifted high school students studying in rural and urban schools; (ii) there was no significant difference in the learning style preferences of gifted male and female high school students; (iii) there was no significant difference in the learning style preferences of gifted high school students with internal and external locus of control; (iv) there was no significant difference in the learning style preference of gifted high school students with high and low self-esteem.
Kumar (2006) studied cognitive and learning styles among tribal and non-tribal senior secondary school students of Himachal Pradesh. The sample consisted of 202 non-tribal and 205 tribal senior secondary students studying in 12th class selected through cluster sampling technique. Group Embedded Figure test (GEFT) by Oltman, Raskin and Witkin (1971), Learning Styles Inventory by Dangwal and Mitra (1998), Rotter’s 'Locus of Control' scale (Hindi version) by Kumar and Srivastava (1985), Self-Esteem Inventory by Sangita (1996) and State Trait Anxiety Inventory (Hindi version) by Spielberger et al. (1970) were the tools used for collecting the requisite data. The two-way analysis of variance technique was employed for data analysis. In case of significant 'F' ratios, Tukey test was used. The following conclusions were drawn: (i) Gender had significant effect on cognitive styles as well as on learning styles; (ii) as regards learning styles, male students showed more preference for analytical and precision learning styles whereas, female students had stronger preference for imaginative and dynamic learning styles; (iii) the main effect of trait-anxiety emerged significant on cognitive style and three learning styles namely; imaginative, analytical and precision; (iv) the students having low level of trait-anxiety were found to be higher on cognitive field dependence, imaginative, analytical and precision learning styles.

Kumari (2008) examined the thinking and teaching styles of teacher educators in relation to some selected variables. The sample consisted of 186 teacher educators drawn from the 31 B.Ed. colleges in Himachal Pradesh. From each B.Ed. college, six teacher educators were randomly selected i.e. by lottery method. Thinking styles of teacher educator were measured through Hindi adaptation of Inquiry Mode Questionnaire (by Verma) and Teaching Style Inventory developed by Garsha (1996) was used. One way ANOVA and 't' test were employed to analyze the effects of independent variables on dependent variables. The major findings of the study were: (i) Teacher educators having high, average and low level of self-esteem did not show significant difference in preference for synthesist, pragmatic and
realistic thinking styles; (ii) male and female teacher educators did not differ in their preference for synthesist, idealist, pragmatic and analytic thinking styles but show significant difference in realist thinking style (iii) teacher educators in high, average and low age groups did not show any marked difference in preference for different thinking styles; (iv) teacher educators belonging to science and arts stream of study were similar in their preferences for different thinking styles; (v) expert, formal authority and facilitator teaching styles were found to be unrelated with thinking styles. But, personal model and delegator teaching styles came out to be related in a positive way with realistic thinking style.

Kaur and Neetu (2010) attempted to explore the relationship of emotional intelligence with styles of learning and thinking (SOLAT). The study was conducted on a representative sample of 200 adolescents studying in class IX selected through random sampling technique from different secondary schools of Patiala. Emotional Intelligence Test by Chadha (2002) and Style of Learning and Thinking (SOLAT) by Venkataraman (1994) were used to collect the requisite data. Two-way analysis of variance was used to study the main and interactional effects of gender and styles of leaning and thinking on emotional intelligence of adolescents. The following conclusions were drawn: (i) Male and female adolescents do not differ significantly on emotional intelligence; (ii) adolescents with whole/integrated brain were found to be significantly more emotionally intelligent as compared to their counterparts with right and left hemispheric brain dominance; (iii) male adolescents with right and left hemispheric dominance were found to be more emotionally intelligent than their female counterparts though not significantly so. However, females who were integrated brain found to be more emotionally intelligent, though not significantly so.

Sood (2010) examined thinking, learning and problem solving styles of teacher trainees as a function of their creativity and gender.
Initial sample in the study comprised of 503 teacher trainees of both genders. These were drawn by random cluster sampling technique. Hindi adapted version developed by Verma of Thinking Style Inventory (short form) of Sternberg and Wanger (1992), Your Style of Learning and Thinking (YSOLAT) Form A by Torrance, Reynolds, Riegel and Bell (1977), Kolb's Learning Style Inventory (Revised 1985) Hindi adapted version by Verma, Hindi version of short form of Grasha-Riechmann's Students’ Learning Style Scale prepared by Verma (1995) and Creative-Problem Solving Profile Inventory by Basadur (1990) were used for the collection of requisite data. To find out the main and interactional effects of creativity and gender on thinking, learning and problem solving styles, two-way analysis of variance technique was used. The major findings of the study were: (i) There was significant effect of creativity on left hemispheric and right hemispheric thinking style; (ii) high creative teacher trainees exhibited preference for the use of right hemispheric thinking style more than the low creative teacher trainees who show more preference for left hemispheric thinking style; (iii) there was significant effect of gender on right hemispheric and integrated thinking style; (iv) male teacher trainees had greater tendency for using right hemispheric thinking style while female teacher trainees were more prone to adopt external and integrated thinking style; (v) there was significant interaction between creativity and gender with reference to monarchic and internal thinking styles; (vi) there was significant effect of creativity on participative learning style of teacher trainees; (vii) there was significant effect of gender on assimilator, accommodator, collaborative, participant and avoidant learning styles of teacher trainees. Male teacher trainees had more preference for the use of assimilator and avoidant learning styles than female teacher trainees; (viii) there was no significant interactional effect of creativity and gender for any learning styles of teacher trainees.

Ramakrishnan and Naseema (2012) undertook a study with the major objective to examine the nature of thinking styles among
secondary school students in Kerala. The study was conducted on a sample of 486 secondary school students studying in standard IX randomly selected from 13 schools from six districts of Kerala state. The sample constituted of 228 boys and 258 girls. It included 325 students from government schools, 161 from aided schools, 265 from urban areas and 221 students from schools situated in rural areas. The data were analyzed by using computer software and measures of central tendencies, dispersions and percentages were estimated and subjected to necessary statistical tests. The major findings of the study were: (i) It was revealed that 54.7 percent of the legislative, 55.8 percent of the judicial, 57.6 of the executive, 52.5 percent of monarchic, 56.8 percent of the hierarchic, 53.9 percent of oligarchic, 55.1 percent of anarchic, 55.3 percent of internal, 51.4 percent of external, 52.9 percent of global, 56.0 percent of local, 63.6 percent of liberal and 62.8 percent of conservative style of thinking were present among secondary school students; (ii) significant percentage of government school students was found to be more monarchic than the aided school students. Monarchic persons tend to concentrate their energy and attention on one thing at a time; (iii) a high percentage of government school students were found to be significantly liberal than the aided school students. Liberal individuals prefer unfamiliar and ambiguous situations. They like changes and defy conventions. So, it was derived that more government school students had these tendencies as compared to the aided school students; (iv) significantly a high percentage of rural students were found to be more executive than their urban counterparts. Pupils with executive thinking style prefer to obey what they are asked to do. They follow structured rules and instructions; (v) the study indicated that more urban school students dislike and prefer familiar and unambiguous situations; (vi) it was also concluded that no significant differences existed between boys and girls with respect to their possession of thinking styles in all dimensions.
2.5 AN OVERVIEW

An extensive review of literature related to different aspects of emotional intelligence, academic anxiety, academic achievement and styles of learning and thinking of students and teachers was carried out by the researcher. The review of research studies made it evident that it is of vital significance to undertake research study on styles of learning and thinking of students and explore its influence on emotional intelligence, academic anxiety and academic achievement. It will be helpful in designing possible means of interventions for promoting effective learning and thinking among individuals for the wholesome development of their personality. It was revealed from the review of studies that different styles of learning and thinking are based on the functioning of brain hemispheres. Verma (1994), Sundaram and Kumar (2000) and Jain (2001) revealed that boys possessed left hemispheric dominance and girls were right hemispheric dominated. Whereas, the studies by Grigorenko and Sternberg (1997), Kumari (2005) and Ramakrishnan and Naseema (2012) showed no significant gender difference with respect to the styles of learning and thinking (brain hemisphere dominance).

The investigations on other variables such as; creativity, test-anxiety, intelligence, locus of control, academic performance, self-esteem etc. with regard to styles of learning and thinking have also propounded varied results. The studies of Panda (2009), Umadevi (2009), Negi (2011) and Sharma and Ahlawat (2011) reported that there existed no significant difference between male and female teachers with respect to their emotional intelligence. Contrary to this, Reddy and Venu (2010), Singh (2010), Sood and Anand (2011) and Agarwal and Gupta (2012) concluded that female secondary school teachers possessed significantly higher emotional intelligence than their male counterparts. With regard to relation of emotional intelligence with styles of learning and thinking, it was revealed by Vandana (2004) that low emotionally intelligent prospective teachers
had higher level of reflective, intuitive and verbal learning styles than prospective teachers with high emotional intelligence. The study of Kaur and Neetu (2012) reported that the male adolescents with right and left hemispheric dominance were found to be emotionally more intelligent than their female counterparts. However, females who possessed integrated brain functioning found to be emotionally more intelligent. In addition, adolescents with whole/integrated brain dominance were found to be significantly more emotionally intelligent as compared to their counterparts with right and left hemispheric brain dominance.

The research literature on academic anxiety showed that boys and girls did not differ significantly in terms of their academic anxiety (Trivedi, 1995; Garg, 2011; and Ali and Zahoor, 2012). Contrary to this, the studies by Mehrotra (1986) and Bhansali and Trivedi (2008) concluded that girls had significantly high academic anxiety than boys. It is pertinent to mention here that no research evidence signifying relation of academic anxiety with styles of learning and thinking came into the way of the researcher during the course of review of related literature. Although, the influence of test anxiety on leaning and thinking styles have been explored by few researchers (Kumar, 2006; Mokashi, 2007; and Mahmood and Rana, 2010).

The studies on academic achievement and its covariates are abundant. This variable has been studied extensively by the previous researchers demonstrating varied results sometimes supporting and sometimes in conflict with other researches. As far as the studies on styles of learning and thinking and their influence on academic achievement is concerned, it was revealed by Rujuta and Kadlaskar (1995) that gifted girls were significantly high on right hemispheric and integrated hemispheric abilities whereas; girls with average intellect were high on left hemispheric abilities. Rani (2003) observed that left brained styles of learning and thinking had higher correlation with intelligence in comparison to right brained and whole brained
styles of learning and thinking. It was reported by Sood (2012) that the high creative teacher trainees exhibited preference for the use of right hemispheric thinking style than low creative teacher trainees who showed more preference for left hemispheric thinking style.

The perusal of literature makes it amply clear that styles of learning and thinking have a distinct impact on teaching-learning process. The identification of students’ preferred styles of learning and thinking and corresponding instructional interventions may lead to the development of emotionally intelligent, academically competent and well-adjusted students in any type of academically adverse situations. After visiting enormous literature, it comes to forefront that hardly any serious attempt has been made by the scholars to explore the impact of styles of learning and thinking on academic anxiety and separate aspects/dimensions/components of emotional intelligence. Moreover, contradictory findings have been reported in different studies related to impact of styles of learning and thinking on the variables under investigation. Even with regard to gender and social differentials in styles of learning and thinking, emotional intelligence and academic anxiety, no consistency or pattern in results got emerged after making a thorough review of research literature. Looking at such gaps, the present investigation has been designed to explore the treasure of knowledge related to emotional intelligence, academic anxiety, academic achievement as related to styles of learning and thinking among high school students. The overview of the findings of previous research studies also provided a sound base to formulate following hypotheses for verification:

2.6 HYPOTHESES OF THE STUDY

1. There exists no significant difference among high school boys and girls with respect to their overall emotional intelligence and it’s four components i.e. (i) intra-personal awareness, (ii) inter-personal awareness, (iii) intra-personal management and, (iv) inter-personal management.
2. There exist no significant differences among high school students in overall emotional intelligence and it’s four components i.e. (i) intra-personal awareness, (ii) inter-personal awareness, (iii) intra-personal management and, (iv) inter-personal management with respect to their styles of learning and thinking.

3. Gender and styles of learning and thinking of high school students do not interact significantly with regard to overall emotional intelligence and it’s four components i.e. (i) intra-personal awareness, (ii) inter-personal awareness, (iii) intra-personal management and, (iv) inter-personal management.

4. Students belonging to different social categories i.e. general, scheduled caste and other backward classes do not differ significantly with respect to their overall emotional intelligence and it’s four components i.e. (i) intra-personal awareness, (ii) inter-personal awareness, (iii) intra-personal management and, (iv) inter-personal management.

5. Social category and styles of learning and thinking of high school students do not interact significantly with regard to their overall emotional intelligence and it’s four components i.e. (i) intra-personal awareness, (ii) inter-personal awareness, (iii) intra-personal management and, (iv) inter-personal management.

6. There exists no significant difference in academic anxiety of high school boys and girls.

7. There exist no significant differences in academic anxiety of high school students possessing different styles of learning and thinking.

8. Gender and styles of learning and thinking do not interact significantly with regard to academic anxiety of high school students.

9. There exist no significant differences in academic anxiety of high school students belonging to different social categories.
10. Social category and styles of learning and thinking do not interact significantly with regard to academic anxiety of high school students.

11. There exists no significant difference in academic achievement of high school boys and girls.

12. There exist no significant differences in academic achievement of high school students possessing different styles of learning and thinking.

13. Gender and styles of learning and thinking do not interact significantly with regard to academic achievement of high school students.

14. There exist no significant differences in academic achievement of high school students belonging to different social categories.

15. Social category and styles of learning and thinking do not interact significantly with regard to academic achievement of high school students.