CHAPTER 2
REVIEW OF THE RELATED LITERATURE

Review of related literature is an essential aspect of research. It involves synthetic and synoptic understanding of the research works already conducted in the same field over a period of time. It provides some insight regarding strong points and limitations of the previous studies and enables the researcher to improve his own investigation (Rais, 2011).

The study of related literature will be useful to see as to what has already been done concerning the problem at hand. It provides the researcher up to date information in the concerned field. The review of related literature enables the researcher to define the limits of his field (Koul, 1997).

If we want to do some new research in a subject, it is very necessary that we should know the past of that subject. Without knowing the past we cannot do something new in that field. The successful lawyer must have the knowledge of previous cases. Obviously the careful student, the research worker and investigator should become familiar with the location and the use of sources of educational information.

John W. Best (2003) has stated, “All human knowledge can be found in books and libraries, unlike other animals and that must start a new with each generation, man builds upon the accumulated and recorded knowledge of the past”.

The literature in any field forms the foundation upon which all future work will be done. If we fail to build this foundation of knowledge provided by the review of the literature, our work is likely to be shallow and novice. Old literature helps the researcher in the classification of his problem and in avoiding duplication.

Review of related literature is, thus an important pre-requisite to actual planning and then the execution of any research work. Review of related literature besides developing the insight of the investigator also accomplishes following specific purposes:-

1. The review of related literature enables the researcher to define the limits of his field. It helps the researcher to delimit and define his problem.

2. To avoid unfruitful and useless problem areas by the selection of those areas in which positive findings are likely to result.
3. To bring the researcher up-to-date on the work which others have done and thus to state the objectives clearly and concisely.

4. To suggest methods of research appropriate to the problem. The review also provides an insight into tools and statistical methods through which validity of results is to be established.

5. Through the review of related literature, the researcher can avoid unintentional duplication of well-established findings.

6. To know about the recommendations of previous researchers listed in their studies for further research (Koul, 1997).

2.1 STUDIES RELATED TO ACADEMIC ACHIEVEMENT AND METACOGNITION

Pintrich and DeGroot (1990) examined the relationship between motivation and self-regulation strategies with academic achievement for 7th grade students. Under self-regulation they included metacognitive activities and effort management strategies. Self-regulation strategies were the best predictors of academic performance among a group of variables that included motivation and cognitive strategy use.

Swanson (1990) while studying the influence of metacognitive knowledge found that students with high metacognitive skills out performed those with lower metacognitive skills in problem solving tasks regardless of their overall aptitude.

Rasnak (1995) studied metacognitive dimensions and use of learning strategies by adult college students and traditional age college students and found that the two groups of subjects differed significantly in their concepts of learning process, in their level of metacognitive knowledge about how to learn and in their use of learning strategies.

Landline and Stewart (1998) studied relationship between metacognition, motivation, locus of control, self efficacy and academic achievement and found that there exists significant positive relationship between metacognition, locus of control, self-efficacy and academic achievement.

Schouwenburg and Kossowska (1999) conducted a study on learning styles: Differential effects of self-control and deep-level information processing on academic achievement and found that strategic approaches to studying and work discipline are predictors of good study result.
Baker and Cerro (2000) while assessing metacognition in children and adults had shown that students who are high achievers in academic learning domains such as reading, writing, math and science also exhibit higher levels of metacognitive knowledge about the domain and have developed greater abilities in self-regulation.

Singhal (2001) conducted a research on the role of metacognitive awareness in the reading comprehension process and concluded that less effective readers often have misconception about the reading process, fail to monitor their comprehension, underutilize effective reading strategies, and employ fewer reading strategies when reading. Skilled readers on the other hand, know and use many different strategies in coming to terms with text. They employ both “bottom-up’ and “top-down” reading strategies, use a wider range of strategies and use them more frequently and employ metacognitive knowledge, that is knowledge of when and how comprehension and monitoring processes apply.

Cetinkaya and Erktin (2002) studied correlations of metacognition with reading comprehension, achievement, and aptitude. The result showed that the awareness and cognitive strategies subscales of the inventory were significantly and positively correlated with reading comprehension, self-checking and evaluation. Subscales of the inventory were significantly and positively correlated with science course grades of the gifted students. No significant correlations were found between the metacognition scores and the achievement in the Turkish, Science and Mathematics courses.

Joshi and Sharma (2003) explored and compared the developmental trends of different cognitive variables among students and found no significant difference between the cognitive development of boys and girls. These abilities increase with age. However, at a certain age boys are more developed in verbal reasoning than girls, while girls are more developed in abstract reasoning.

Kramarski and Mevarech (2003) report the results of a study investigating the effects of metacognitive training on the mathematical reasoning and metacognitive skills of 384 eighth-grade students. They found that students exposed to metacognitive instruction in either cooperative or individualized learning environments outperformed comparison of students with respect to the ability to interpret graphs, fluency and flexibility of correct mathematical explanations, use of logical arguments to support math reasoning,
performance on transfer tasks, and level of domain-specific metacognitive knowledge, such as strategies for representing math concepts in multiple ways and specific mathematical strategies for interpreting graphs.

Cooper (2004) looked for evidence that metacognitive skills improve with age, particularly in professional teachers. Teachers working in various grade levels from preschool to post-secondary were compared. No significant difference were found among teachers who teach different grade levels, however, results indicated that metacognitive scores improve with age and years of teaching experience.

Allon, Gutkin, and Bruning (2006) explored the relationship between metacognition and intelligence in a group of normal adolescents. Correlation analysis indicated a non-significant relationship between metacognition and intelligence.

Gakhar (2006) while studying academic achievement of students in relation to their preferred learning styles and study skills inferred that the students who had stronger preference for thinking style were likely to get higher academic marks in the examination or vice versa. It may be said that students whose academic achievement was higher, were likely to have stronger preference for the imaginative thinking style and students showing weaker preference for imaginative thinking style were likely to obtain poor academic achievement.

Garret, Mazzocco and Baker (2006) studied the development of metacognitive skills of prediction and evaluation on 202 children with and without disability. The elementary students with and without math difficulty revealed that metacognition changes over time and the children who struggle with math have poor cognition, specifically, they were overconfident about the number of math problems they could solve correctly and they were less accurate in evaluating their answers. It was suggested that direct classroom instruction in metacognition would be beneficial for children with math difficulty. It was also concluded that metacognition, previewing and self monitoring are important determinants of mathematics performance. Hence, these abilities can and should be developed in order to enhance students’ ability to succeed academically.

Namabu and Kunijiro (2006) investigated moderator effects of metacognition in relation to motivational beliefs, learning strategies and academic achievement in math. Students were categorized according to metacognition as low, middle or high. Some
differences were found between the low and high metacognition groups in the relation between motivational beliefs and the understanding oriented strategy and in the relation between the learning strategies and academic achievement. In the middle metacognition group, the relationships were weaker than the other two groups. It was inferred that metacognition has quadratic effects for these relationships.

Ponnusamy (2006) conducted a study on the impact of metacognitive strategies among lower achievers in secondary schools. Research was conducted using a quasi-experimental design with pre- and post-tests. The results revealed that the group which received metacognitive and problem solving strategies out-performed the other two groups in objective, subjective and essay tests, reported higher metacognitive awareness, used more metacognitive strategies during problem solving, attained higher metacognitive knowledge and could answer more higher level cognitive questions. The study showed that metacognitive and problem solving strategies had a significant impact on academic achievement, metacognitive awareness and metacognitive knowledge. Also, the ability to use and reflect on metacognitive strategies during problem solving could bring about a positive attitude towards the learning of History and the ability to answer higher level cognitive questions.

Savithiri (2006) conducted a study on impact of metacognitive strategies in enhancing perceptual skills among high school students in learning Geometry. The study took place over a six-week period with 50 high school students. Research was conducted in single group design with pre, progressive and post-test. The study observed that student's achievement level has increased after implementation of metacognitive strategies and application of perceptual skills. The finding of the study reveals that by using metacognitive strategies perceptual skills could be enhanced in learning Geometry. It is also pointed out that both perceptual skills and metacognitive strategies are needed to learn Geometry.

Reilly and McNamara (2007) examined how well cognitive abilities predict high school students’ science achievement as measured by traditional content-based tests. Students were assessed on their science knowledge, reading skills and reading strategy knowledge. The cognitive variables reliably predicted all three measures of science achievement and there were also significant gender differences. Reading skills helped the learners
compensate for deficits in science knowledge for most measures of achievement and had a larger effect of achievement scores for higher knowledge than lower knowledge students.

**Saravanakumar and Mohan (2007)** conducted a study on enhancing the level of meta-cognitive orientation and attention and activation techniques towards enhancing student’s achievement in science. An experimental design has been adopted. 47 students of Standard 10th of a local school were the sample subjects. Three tools were developed and validated to assess meta-cognitive orientation attention activation and achievement in science. The data for meta-cognitive orientation, attention activation and achievement in science on pre, progressives and post-assessment were collected and computed for analysis. Gradual increase in the dependent variable viz., student’s achievement in science from initial assessment to final assessment indicates the influence of the independent variables namely, meta-cognitive orientation and attention activation strategies.

**Zakaria, Yazid and Ahmad (2007)** conducted a study to examine whether there was a correlation between metacognitive awareness and students’ achievement on mathematical problem solving tasks. In addition, the study investigated whether there were differences in metacognitive awareness in mathematical problem solving in relation to gender and discipline of study. The findings showed that there was a significant relationship between metacognitive awareness and students’ achievement in mathematical problem solving. There were no significant differences in metacognitive awareness in mathematical problem solving with respect to gender. Nevertheless, there was a significant difference in the dimension of self-checking between male and female. There were also significant differences in metacognitive awareness depending on discipline of study.

**Ozsoy and Ataman (2008)** conducted a study to investigate the effect of using metacognitive strategy training on mathematical problem solving achievement. The experimental group (n=24) instructed to improve their metacognitive skills. At the same time the students in the control group (n=23) received no additional activities and continued their normal lessons. Students were pre- and post-tested with the Mathematical Problem Solving Achievement Test and Turkish version of Metacognitive Skills and Knowledge Assessment (MSA-TR). The results indicated that students in the
Simsek and Balaban (2008) conducted a study to assess the most commonly used learning strategies of undergraduate students and how these strategies were related to their academic performance. Results showed that successful students used more, varied, and better learning strategies than unsuccessful students. Female students were more effective in selecting and using appropriate strategies than male students. There were a variety of differences among fields of study; students of fine arts used the strategies least, while students of sports used them the most. The most preferred group of strategies was metacognitive strategies, whereas the least preferred group was organization strategies. The same pattern was found for the level of success, gender, and field of study. The results overall imply that certain strategies contribute to student performance more than other strategies, and majority of university students are aware of this situation.

Young and Fry (2008) examined the Metacognitive Awareness Inventory (MAI) to determine how it relates to broad and single measures of academic achievement in college students. Significant correlations were found between the MAI and broad measures of academic achievement. The knowledge of cognition factor of the MAI was correlated with GPA and end of course grades. Significant differences were found between graduate and undergraduate students with regard to their scores on regulation of cognition factor of the MAI but not the knowledge of cognition factor.

Ibe (2009) conducted a study on effects of metacognitive strategies on classroom participation and student achievement in Senior Secondary School Science classrooms. Results revealed that the Metacognitive strategies were most effective in enhancing academic achievement followed by the TPS (Think Pair Share). The researcher recommends that Metacognitive strategies and questions be infused in the classroom so as to help students learn material more efficiently, retain information longer and generalize skills.

Sami and Ozgul (2009) investigated the relationship among science achievement, metacognition and epistemological beliefs of 941 altogether elementary students and found that for 4th grade and 5th grade students, knowledge of cognition, regulation of cognition and quick learning contributed to science achievement. For 6th through 8th
grade students, knowledge of cognition, regulation of cognition, innate ability and quick learning contributed to science achievement. For both groups of students metacognition was also related to gender and socio economic status. They also found that students in urban areas developed better knowledge of cognition and regulation of cognitive skills.

*Gulsum et al. (2010)* examined the differences in the level of 7th grade Turkish students' cognitive and metacognitive strategy use in science and investigated the contribution of cognitive and metacognitive strategy use to students' science achievement. The present study also explored the relationships between students' background characteristics and their cognitive and metacognitive strategy use and science achievement. The statistical analyses revealed significant differences in the level of students' cognitive and metacognitive strategy use scores. Besides, elaboration, organization, and metacognitive self-regulation strategy use were found to make a significant contribution to students' science achievement. Moreover, prior knowledge, parents' educational level, number of reading materials at home, frequency of buying a daily newspaper, presence of a separate study room, and presence of a computer with internet connection at home were significantly not associated with cognitive and metacognitive strategy use and science achievement.

*Kaur (2010)* conducted a study of learning outcomes of adolescents in relation to their emotional intelligence, metacognition and personality traits. The findings of the study were that there was positive and significant relationship between academic achievement and metacognition. The results lead to the inference that adolescents with high metacognition were good in academic achievement but adolescents with low metacognition were not so good in their academic achievement. Significant difference in the academic achievement of male-female adolescents, rural-urban adolescents and government-private school adolescents were found. Female possesses higher academic achievement than male adolescents. Rural student's academic performance was better than urban adolescents. Also, adolescents studying in government schools have higher academic achievement. There exists no significant difference between metacognition of male and female adolescents. There exists significant difference between rural-urban and government-private students on metacognition. Urban adolescents possess higher
metacognition than rural adolescents. Also, adolescents of government schools have higher metacognition than private.

2.2 STUDIES RELATED TO ACADEMIC ACHIEVEMENT AND SELF-CONFIDENCE

Konvalina (1981) investigated self-assessment, achievement, and confidence in basic mathematics skills. Thirty college students enrolled in a self-paced developmental mathematics course were randomly assigned to either an experimental group that performed a written self-assessment before each test, or to a control group that did not perform the written self-assessment. No significant differences were found between the groups in achievement or general confidence in basic mathematical skills. However, the experimental group consistently had a higher confidence mean over a 25-item basic skills inventory and scored higher on a significant proportion of skills. A highly significant correlation was found between skill confidence and achievement over the 25 basic skills for the combined groups. A significant correlation was found between group confidence and group achievement for the experimental group, but not for the control group.

Jain (1990) investigated a study to find out the relationship between self confidence and academic goals of adolescent girls and identify them with parent or parent substitutes. It was concluded that girls having high self confidence tend to select high academic goals, which were positively associated with each other and suggested that they reinforce each other where academic achievement was dependent on the concept of self that adolescent girls possessed. Identification with parents and parent substitutes by and large led to higher academic goals.

Verma (1990) aims to analyze the sex differences in risk-taking, self-confidence and anxiety among adolescent learners. His sample consisted of 200 adolescents with equal number of male and female students studying in class X, selected randomly from different institutions of Behror in Alwar District in Rajasthan. Results indicate that male adolescent learners showed higher mean risk-taking than female adolescent learners. Male adolescent learners’ possessed significantly higher self-confidence than female adolescents. Female adolescent learners had significantly more anxiety than male adolescent learners.
Nowicki and Duke (1992) studied the determinants of academic success among 412 students of XI grade. It was found out that low levels of empathy, handling stress, self-confidence, self-acceptance, group dynamics and control on emotions were associated with poor school achievement.

Ziegler & Heller (2000) made a study of conditions for self-confidence among boys and girls achieving highly in chemistry. Indicated that girls already expressed significantly lower levels of self-confidence regarding chemistry than did boys.

Vamadevappa (2003) studied self-concept and achievement in Biology. Results revealed that self-confidence is positively related to the achievement in Biology, under achievers and overachievers differ significantly in their self-confidence. Under achievers have low self-concept. From this it may be concluded that low self-confidence is the cause of underachievement in Biology.

Berlanga (2004) conducted a study on the efficacy of an intensive guidance intervention program to increase academic success of at-risk middle school students and found that there is a definite effect on students self confidence and a contribution to students successful academic performance.

Hannula et al. (2004) with the help of this paper presents some preliminary results of the longitudinal aspect of a research project on self-confidence and understanding in mathematics. They collected a survey data of 3057 fifth graders and seventh-graders and a follow-up data of ten classes (191 pupils) one and a half years later. The longitudinal data indicates that the learning of mathematics is influenced by a pupil’s mathematics-related beliefs, especially self-confidence. Pupils’ level of understanding fractions also influences their developing understanding of infinity. These relationships between different variables depend also on pupils’ gender and age.

McNair (2004) conducted a study entitled “Students self confidence and the looking-glass self: Perceptions of emotional support, role models, and academic success on a community college campus.” Self confidence was higher when students perceived themselves as academically adjusted and successful. Self confidence was lower with expecting to drop out. Regression analysis revealed that self confidence depends on students being academically adjusted, academically successful.
Partington (2004) conducted a study on the impact of self-confidence on academic achievement and aspirations of urban minority adolescents and found that students with high self-confidence would be more likely to have high levels of academic achievement and future aspiration than those with low self-confidence and interactive effect was expected such that high self-confidence was related to high achievement resulting in higher aspirations. Gender differences were also examined.

Paliwal, Dube and Mathur (2006) studied school environment, school adjustment and self-confidence of high school adolescents of Jaipur City. Results of the study revealed that majority of boys and girls scored in average category on school adjustment and self-confidence. School environment indicated no correlation with self-confidence and school adjustment of students except on social adjustment which was found to be negatively correlated with self-confidence.

Chang & Cheng (2008) studied the interrelationship between senior high school students' science achievement and their self-confidence and interest in science. Statistical analyses indicated that a statistically significant correlation existed between students' science achievement and their self-confidence and interest in science. Results of t-test analysis also revealed that there were significant mean differences in students' science achievement and their knowledge (including physics, chemistry, biology, and earth sciences subscales) and reasoning skill subtests scores between higher self-confidence and interest in science and lower self-confidence and interest in science students, with generally large effect sizes.

Usha and Lakshmi (2008) studied influence of parenting style and self-confidence on mental health of secondary school pupils. The main objective was to study the main effects of parenting style and self-confidence on mental health. From the study it can be concluded that parenting style and self-confidence influence the mental health of students.

Dhall and Thukral (2009) studied intelligence as related to self-confidence and academic achievement of school students and found that there exists positive significant relationship between intelligence and self-confidence in respect of secondary school students. Intelligence relates significantly with academic achievement of the students of secondary school.
Gurubasappa (2009) studied intelligence and self-confidence as correlated to academic achievement of secondary school students. In the study the investigator finds that the highly intelligent students and students with better self-confidence achieve high in school, i.e. the academic achievement of students is certainly influenced by psychological factors like intelligence and self-confidence. The major findings were that there is high significant correlation between academic achievement with intelligence and self-confidence.

Joshi & Srivastava (2009) has undertaken this study to investigate the self-esteem and academic achievement of urban and rural adolescents, and to examine the gender differences in self-esteem and academic achievement. The findings indicated that there were no significant differences with regard to self-esteem of rural and urban adolescents. There were significant differences with regard to academic achievement of rural and urban adolescents. Urban adolescents scored higher in academic achievement as compared to rural adolescents. Boys would score significant higher on self-esteem as compared to girls. Significant gender differences were found in academic achievement. Girls were significantly higher on academic achievement as compared to boys.

Parvathamma and Sharanamma (2010) studied the anxiety level and level of self-confidence and their relation with academic achievement. Major findings of the study were that there was a significant difference between anxiety level of boys and girls. There was a significant difference between self-confidence level of boys and girls.

Singh (2010) studied the level of academic anxiety, self-confidence and their relation with academic achievement in secondary students. The main findings of the study were that there was significant correlation between academic anxiety and academic achievement; self-confidence and academic achievement; and no significant difference between self-confidence levels in male and female.

Were, Indoshi and John (2010) studied gender differences in self-concept and academic achievement among visually impaired pupils in Kenya. Results of the study revealed that there are gender differences in self-concept among visually impaired pupils. Girls scored higher than boys in self-concept and hence in achievement test.

Chahal (2011) conducted a study on emotional maturity, self-confidence and academic achievement of adolescents in relation to their gender and urban-rural background. Main
findings of the study were that there exists significant difference between the male and female adolescents on their level of self confidence and academic achievement. Also there exists significant difference between urban and rural adolescents on their level of self confidence and academic achievement.

Jafri (2011) conducted a study on “Impact of Family Climate, Mental Health, Study Habits and Self Confidence on the Academic Achievement of Senior Secondary Students”. Results reveal that self-confidence was found to be significantly and positively related to the academic achievement of total number of students but self-confidence does not play any significant role in influencing academic achievement of arts students. Significant difference was found between male and female respondents of science stream on the factor self-confidence. The mean value of males is higher than the mean value of females.

Shiroli Laxmikant (2011) conducted a study on influence of the motivational techniques and self confidence on performance. The study found that mean scores of high self-confident group is higher than the low self-confident, in both pre-test and post-test. There is a significant effect of all motivational techniques on the performance of high and low Self-confident students in speed, flexibility and strength tests. Motivation produced significant increases in performance of low self-confident players in endurance test also. Self-confidence produced significant differences in endurance, strength, and flexibility: high self-confident players scored significantly high means.

Safa Mohammad Al-Hebaish (2012) conducted a study on the correlation between general self-confidence and academic achievement in the oral presentation course. The findings mentioned importance of self-confidence in speaking a foreign language. Self-confident learners are ready to speak in public. They work hard, perform well and accordingly, achieve academic progress. On the contrary, the issue of developing oral communication skills becomes problematic when learners suffer from a lack of self-confidence. Low confident learners feel uncomfortable, afraid and frustrated in the classroom. As a result, they tend to perform with less effectiveness and satisfaction, which is affecting their academic achievement in general.

Ahmad & Safaria (2013) investigated effects of self-efficacy on students’ academic performance. The result showed that there is a difference between mean of the individual
with high self-efficacy and with low self-efficacy. It shows individual with high self-efficacy believes to solve a greater number of mathematical problems. This study confirmed that there is a significant difference between means of a group with high self-efficacy and with low self-efficacy among subjects.

2.3 STUDIES RELATED TO ACADEMIC ACHIEVEMENT AND FAMILY ENVIRONMENT

Jain (1965) conducted an experimental study of relationship between home environment and scholastic achievement. The study was designed to investigate experimentally into the influence of home environment as correlates of scholastic achievement with reference to particular school subjects. Findings of the study were, the influence of home environment on achievement is positive and significant. Socio-economic conditions seem to have no relationship with school achievement.

Kulshreshta (1981) tried to study the factors related to differential patterns of achievement among bright students. One of the objectives, of the study was to find out how parental attitudes, family background and basic skills influenced academic achievement of bright students. Among other things it was found that under achievement was directly related with the parent’s care concerning collecting fees and other facilities for these children and secondly, underachievers lived in more noisy houses.

Chopra (1982) designed a study related to this area in order to identify the variables having positive relationship with academic achievement and to find out the relative importance of intelligence and various non-intelligence variables in determining academic achievement. Results indicate that home adjustment was more clearly related to academic achievement, than emotional health and social adjustment.

Nabuka (1984) studied the influence of home background variables on academic achievement of Fijian and Indian students. A significant difference was noticed on academic achievement of both the categories of students. It was observed that the interest of family members, support and their psychological stimulation towards their children significantly affect their academic achievement. In brief, Indian students performed better in different subjects than their Fijian counterparts.

Agarwal (1986) designed a study to understand the effect of parental encouragement upon educational development of secondary school students. Results of the study showed
that the high achieving group had been getting higher parental encouragement. The high achieving girls got greater parental encouragement in the urban areas but in the rural areas the middle achieving group received more parental encouragement.

**Kurdek (1988)** conducted a study to determine the relation of eight graders family structure, gender and family environment with academic performance and their school behavior. It was found that generally students in two-parent nuclear families had attained better academic performance and less problematic behaviour in school than those of students who were brought out either in mother-custody or stepfather families. For students in the mother-custody and stepfather families contact with father was unrelated to academic performance.

**Zahir (1988)** designed an investigation to study the relationship between perceived maternal behaviour and personality as well as scholastic achievement of adolescents. Results show that the mother’s negative attitude towards the child had an adverse effect on the child’s academic performance.

**Eagle (1989)** organized a study on High School students to assess the relative impact of parental attention and mothers’ working patterns on students’ achievement. The findings revealed that the parental attention and family factors affected the students’ post-secondary attainment, even when aspects of home environment were taken into account. However, the home environment factors were less important overall, and many students were found independent of its influence on educational attainment.

**Peng and Wright (1994)** conducted a study indicated that Asian American students were more likely to live in an intact two parent family, to spend more time doing homework and attend more lessons outside school. Major findings drawn from study revealed that home environments and educational activities are important factors of student academic achievement, students from families supportive of learning are likely to have higher achievement scores and home environments and educational activities account for a large part of the difference in student achievement between Asian American and other minority students.

**Wang, Wildman and Calhoun (1995)** found that in addition to the importance of parents’ behaviour and attitudes, children’s perceptions of their parents’ support are
important. Children’s perceptions that their parents are involved and interested in school, and encourage them to do well are positively related to academic achievement.

Wang et al. (1996) found that the parental influence has been identified as an important factor effecting student achievement. Results indicate that parent education and encouragement are strongly related to improved student achievement.

Fuligni (1997) examined the impact of family background, parental attitudes, peer support, and adolescents’ own attitudes and behaviours on the academic achievement of students from immigrant families with Latino, East Asian, Filipino, and European backgrounds. Results indicated that first and second generation students received higher grades in mathematics and English than their peers from native families. Only a small portion of their success could be attributed to their socio-economic background; a more significant correlate of their achievement was a strong emphasis on education that was shared by the students, their parents, and their peers.

Portes et al. (1998) examined the influence of parents’ assistance on middle school students’ problem solving ability and academic achievement. The researchers found that a cooperative problem solving style of interaction between parent and child was significantly correlated with children’s intellectual performance in school.

Thakur (2001) revealed that variables such as home environment with fathers and mother’s education, income and per capita income have effects on the intelligence and educational aspiration. Children who have good home environment probably possess a likelihood of securing better scores on intelligence and educational aspirations. Protectiveness and social isolation have adverse effect on academic aspiration of children. Deprivations of privileges have adverse effect on the educational aspirations of girls which indicates that economy itself plays a crucial role in the academic development of a child. It was also revealed that as the income, intelligence and education increases the educational aspiration of child also increases.

Xitao and Michael (2001) studied that the idea that parental involvement has positive influence on students’ academic achievement is so intuitively appealing that society in general and educators in particular, have considered parental involvement an important ingredient for the remedy for many problems in education. Meta-analysis finding revealed a small to moderate, and practically meaningful, relationship between parental
involvement and academic achievement while, the moderate analysis revealed that parental aspiration / expectation for children’s education achievement has the strongest relationship, whereas parental home supervision has the weakest relationship, with students’ academic achievement. In addition, the relationship is stronger when academic achievement is represented by a global indicator (e.g. GPA) than by a subject-specific indicator (e.g. math grade).

**Shearin and Sherin (2002)** studied parental adolescent interactions and its effect on academic achievement perspective was examined and results indicate that a substantial proportion of adolescent males who perceived parent-adolescent interactions as a positive effect and were identified as having a stable psychological wellbeing, were more likely to have average to above-average grade and high achievement than those who did not perceive parent-adolescent interaction as positive.

**Devi and Mayuri (2003)** conducted an investigation to study family and school factors that affect the academic achievement of residential school children studying in IX and X classes. The result indicated that girls were superior to boys. Family factors like parental aspirations and socio-economic status significantly contributed to academic achievement. Again among school factors teachers qualification, physical setup, curriculum and subject matter, classroom organization, methods of teaching, teacher student interaction were found to be having effect in the academic achievement of the school children.

**Diaz (2003)** conducted a study on personal, family and academic factors affect low achievement in secondary school. Results revealed that family background is the most important and the weightiest factor in determining the academic performance attained by the student.

**Fatima (2003)** studied the relationship between the family climate and educational achievement. She tried to find out whether favourable home climate result in high academic achievement and whether the unfavourable climate leads to poor academic achievement. She found out that there is no relationship between the type of climate and academic achievement of students.

**Golbert (2004)** described the influence of family adversity indicators on school related behavioural problems among multi-ethnic high school students. The findings showed that
family distress, conflict and environment might significantly have impacts on school performance and school related behavioural problems.

**Mohanraj and Latha (2005)** in a study aimed to investigate the relationship between family environment, the home adjustment and academic achievement in adolescents. Family environment appealed to influence home adjustment as well as academic performance. The majority of the sample perceived their family as cohesive, organized, achievement oriented and emphasizing on moral-religious issue with minimal conflict, cohesion and control. The intellectual-cultural orientation and independence in the family environment significantly influenced home adjustment of the adolescents. It was also found that academic performance was significantly related to independence and conflict domains of family environment. Boys and girls differed in perception of the home environment.

**Vamadevappa (2005)** found that there is a positive and significant relationship between parental involvement and academic achievement. There was a significant difference in the achievement scores of boys and girls of high parental involvement group. There was no significant difference in the achievement scores of boys and girls of low parental involvement group. There was significant difference between high achievers and low achievers with respect to parental involvement. There was significant difference between boys and girls in their academic achievement.

**Ahuja & Goyal (2006)** conducted a study to investigate significance of difference in subject-wise performance of adolescents belonging to highly involved and highly aspirant parents and those belonging to low aspirant and low involved parents. Results show that high parental involvement lead to higher achievement of adolescents in Science, English and Math, as compared to that of the group belonging to parents having low involvement with their wards academics. High education aspirations of parents lead to higher achievement scores only in Math. Achievement scores in English and Science were not significantly different for children of parents having high and low educational aspirations. Occupational Aspirations of parents, high or low, did not yield significantly different achievement scores in Science and Math. But higher occupational aspirations of parents led to higher achievement scores in English.
Khanam (2006) studied the relationship between family climate and academic achievement of the male and female students at the secondary school level. She tried to investigate whether the family climate results in high academic achievement or whether the unfavorable family climate results in poor academic achievement. The investigator did not obtain any significant relationship between the family climate and the academic achievement. The achievement of the male and female students was independent of the influence of the type of family climate (favorable, unfavorable).

Bala, Nanda and Kaur (2007) studied the impact of maternal employment on personality traits of urban adolescents. Results shows that adolescents of working mothers are more adaptable, bolder and more competitive whereas adolescents of non-working mothers score higher in academic achievement and creativity.

Siwach (2008) found that good quality of home environment had significant positive correlation with high level of scholastic achievement in boys than among girls, also, the quality of home environment gets deteriorated, the level of scholastic achievement also comparatively declines in boys.

Uwaifo (2008) examined the effects of family structure and parenthood on the academic performance of Nigerian university students. The results showed that significant differences existed between the academic performance of students from single parent family and those from two-parent family structures. The results also indicated significant differences in academic performance of male and female students compared on two types of family structures.

Kaur, Rana & Kaur (2009) made an attempt to explore academic achievement and home environment as correlates of self-concept in a sample of 300 adolescents. The results of the study revealed self-concept to be positively correlated with academic achievement, though not significantly so. A significantly positive relationship of home environment components of protectiveness, conformity, reward, and nurturance with self-concept is revealed, there by meaning that use of rewards and nurturance from parents should be done for positive self-concept development among adolescents. However, the correlation of social isolation, deprivation of privileges and rejection components of home environment is significantly negative with self-concept among adolescents.
indicating that for positive self-concept development among adolescents, there should be less or no use of social isolation, deprivation of privileges and rejection.

Folorunso et al. (2010) examined family background factors that affect students' academic achievement in institutions of higher learning in Nigeria. It was found that student's academic performance was positively influenced by student's parental level of education, maternal income level, age, income of the student and number of hours allocated for reading on daily basis. Those students who spent more hours reading their books daily were found performing better than those who spent lesser hours. The hypothesis that parental educational level impacted positive effects on students' academic performance was confirmed valid for the country while effects of parental occupation and parental income were mixed. The major finding of the paper was that higher educational attainment and income status of parents were essential factors contributing to high academic record of students of tertiary institutions.

Jafri (2011) conducted a study on “Impact of Family Climate, Mental Health, Study Habits and Self Confidence on the Academic Achievement of Senior Secondary Students”. Findings of the study were revealed that there exists a significant & positive relationship was found between Family Climate and Academic Achievement for total number of students. A significant difference was found between male and female respondents of science stream. The mean value of females on the variable of Family Climate is higher than the mean value of males. No significant difference was found between Male and Female respondents of Arts stream on the variable of Family climate.

Rais (2011) studied impact of family climate and parental encouragement on academic achievement among adolescents (14-17 years). Results revealed that significant differences existed among male and female adolescents with regard to family climate. As far as parental encouragement was concerned, some social variables showed significant differences while some did not. As far as academic achievement among male and female adolescents was concerned some social variables showed significant differences while some did not. Family climate and parental encouragement were found to be related among adolescents. Family climate had positive and significant impact on academic achievement of adolescents. As the parental encouragement increased the academic achievement decreased among males.
Chhabra (2012) conducted a study on academic achievement in Hindi in relation to achievement motivation home environment and attitude towards Hindi. Main findings of the study were: home environment does not affect academic achievement in Hindi, male and female students having high attitude towards Hindi differ significantly in their academic achievement in Hindi, male and female students having high level achievement motivation differ significantly in their academic achievement in Hindi and female students achieve higher than male students.

2.4 OVERVIEW OF REVIEW OF RELATED LITERATURE

A brief account of preceding studies leads to the conclusion that research in the field of academic achievement in general and in its relation to the metacognitive variables, self-confidence, and family environment in particular, seems to be developing fast, touching many new areas. Most of the studies whether conducted in India or abroad support multiple results leading to phenomena where the need of further research becomes imperative.

Swanson (1990) found that students with high metacognitive skills outperformed those with lower metacognitive skills in problem solving tasks regardless of their overall aptitude. There exists significant positive relationship between metacognition, locus of control, self-efficacy and academic achievement (Landline and Stewart, 1998). Joshi and Sharma (2003) found no significant difference between the cognitive development of boys and girls. Students who had stronger preference for thinking style were likely to get higher academic marks in the examination (Gakhar, 2006). Students in the metacognitive treatment group significantly improved in both mathematical problem solving achievement and metacognitive skills (Ozsoy and Ataman, 2008). Gulsum et al. (2010) showed metacognitive self-regulation strategy use was found to make a significant contribution to students science achievement.

Jain (1990) concluded that girls having high self-confidence tend to select high academic goals, which were positively associated with each other and suggested that they reinforce each other where academic achievement was dependent on the concept of self that adolescent girls possessed. Self-confidence is positively related to the achievement in Biology, under achievers and overachievers differ significantly in their self-confidence (Vamadevappa, 2003). Partington (2004) found that students with high self-confidence
would be more likely to have high levels of academic achievement and future aspiration than those with low self-confidence. Boys would score significant higher on self-esteem as compared to girls. Significant gender differences were found in academic achievement (Joshi & Srivastava, 2009). Low confident learners feel uncomfortable, afraid and frustrated in the classroom. As a result, they tend to perform with less effectiveness and satisfaction, which is affecting their academic achievement in general (Safa Mohammad Al-Hebaish, 2012).

In the area of Family environment, it has come to light that research studies found contrary and mixed results. Jain (1965) shows positive influence of home environment on achievement. Kulshreshta (1981) results show that parental attitude, family background and basic skills influence achievement of bright students Home adjustment was more clearly related to academic achievement and social adjustment (Chopra, 1982). High parental encouragement, have positive influence on academic achievement (Agarwal, 1986). Students who have parental and peer support are performing better (Fuligni, 1997). Higher parental occupational aspirations and SES significantly contributed to academic achievement (Devi & Mayuri, 2003). According to Uwaifo (2008) significant differences existed between the academic performance of students from single parent family and those from two-parent family structures. Higher educational attainment and income status of parents were essential factors contributing to high academic record of students of tertiary institutions (Folorunso, 2010). As against this, studies conducted by Khanam (2006) showed opposite results and hold that the achievement of the male and female students was independent of the influence of the type of family climate (favorable, unfavorable). The review of studies shows that academic achievement is affected by metacognitive skills, cognitive variables, self-confidence, parental attitude, parental encouragement and family environment. From the review of related studies it could be observed that in India rarely few attempts have been made so far in metacognition. Though it is a multi-prolonged problem, it remains still the question of further research: as the deeper it is studied, the more tangible it is liable to yield the more explored areas to be probed in, to contribute to the teaching-learning process, hence its relevance for the study in hand.