CHAPTER II

REVIEW OF THE RELATED LITERATURE
REVIEW OF THE RELATED LITERATURE

Resilience describes the phenomenon of serving and surviving in the face of adversity, stress, family psychopathology, trauma, etc. Resilience improves the conditions affecting an individual ability to cope (Osofsky & Thompson, 2000). Previous researchers have studied resilience in relation to intelligence, giftedness & developmental concerns. Along with this, it has also been found that the way a student explains his success and failure in academics (Attributional style) plays a pivotal role in determining his beliefs, perceived control, persistence, anxiety and academic stress. Thus, Attributional styles contribute significantly in developing and maintaining Academic Resilience. The present research work has focused on assessing the efficacy of RAT in enhancing Academic Resilience. An attempt has been made in this chapter to present a review of researches available in this particular field. It may provide the insight and direction to have an overview of the area.

ACADEMIC RESILIENCE AND RAT

Research has linked internal locus of control to academic resilience (Rouse, 2001). Studies have reported positive association of internal locus of control with academic achievement among middle and high school students (Connell, Spencer & Aber, 1994). Further, it was found that resilient students were hard workers, engaged themselves in the school activities as compared to their non-resilient peers (Finn & Rock, 1997). Borman & Overman (2004) in a study on low socio-economic status students reported that high engagement in academic activities competency, high self-esteem and an internal locus of control were positively associated with academic resilience. Thus, causal explanations (attribution) play an important role in understanding academic achievement (Craven, Marsh, & Debus, 1991; Follette & Jacobson, 1987; Perry & Magnusson, 1989), helping in predicting and controlling future events and outcomes (Heider, 1958; Weiner, 1985) and enhancing self-esteem and persistence in the face of failure (Weiner, 1985). In a study by Gibb, Zhu, Ailoy, & Abramson, 2002;
Rascle, Le-Foll, & Higgins, 2008) it was reported that new entrant students who made dysfunctional attributions for academic failures had lower grades than students who tended to explain their failures with functional causes. The attributional style related with a learned helplessness style includes internal ability explanations for failure and use of external explanations such as luck or task ease for success (Dweck & Goetz, 1978; Weiner, 1979). This style contrasts with that of mastery oriented children as their academic history is related with success (Diener & Dweck, 1978). Mastery oriented children use personal ability or effort explanations for success and effort explanations for failure. Further research confirmed that maladaptive attributional style and generalized perceptions of external control of the environment may characterize the students with learning difficulty (Fincham & Barling, 1978; Pearl, Bryan & Donahue, 1980). This leads one to infer that such students also exhibit low levels of Academic Resilience. Further, studies have reported that middle School Students with low reading levels but an internal locus of control were more likely to attain high proficiency in reading than those who view new events & situations as outside their control (Capella & Weinstein, 2001). Studies confirm that students can be helped with effective strategies to improve the level of control, ability and improve their performance.( Chan & Moore, 2006). Research validated that students who attributed failure to low effort were more likely to attribute failure to controllable causes for future success. Attributing failure to unknown causes may indicate a global sense of confusion and loss of control over outcomes. This may lead to withdrawal from classroom and academic failure (Schmitz & Skinner, 1993) and a low level of Academic Resilience. Schunk & Gunn (1985) reported that the students make causal ascriptions for the outcomes of their actions. They explored that children’s self-efficacy and skill development were affected by their attributions for task successes and influence of task strategies on attribution. Wentzel & Wigfield (1998) reported that student’s academic success is attributed to their internal or controllable factors. Further Platt (1988) found that attribution for success of “effort” had positive impact on academic self-
concept and effort in college courses whereas the attribution of “ability”
thad a positive effect only on academic self-concept in high school
students. Tennen & Herzberber (1985) reported specific causal
attributions (ability, effort, luck and task difficulty) in course
performance and feelings of frustration. Students with optimistic
attributional style were found to be more successful and less frustrated
in doing assignments as compared to those with pessimistic
attributional style. Similarly Peterson et al. (1975) also found significant
correlation between the level of frustration felt and attributions to
ability task difficulty and effort. In another study by Cobb et al. (1992)
it was found that students believed that success stems from working
hard. Similar findings were observed in a study by Kelley & Michela
(1980) who reported that individuals tend to attribute success to them
and failure to external success. Students with functional attributional
style are, thus, better at ‘bouncing back’ capacity during adversities
than those with dysfunctional attributional style.

Research is equivocal about gender differences in academic
attribution with major difference for attributions to ability and effort.
Meece et al. (2006) showed that males have a tendency to use ability to
explain success whereas females tend to use effort for success,
equation (and ability for lack of success). Plethora of researches have
found similar results in secondary students (Eccles-Parson et al., 1985;
Ryckman & Peckham, 1987; Hui, 2000; Meece et al., 2006; Chedzoy &
Georgiou et al. (2007) in a study found that despite no gender difference
in actual mathematics achievement, males tended to believe that more
marks were due to their intellectual abilities. Similar results were found
by Chedzoy & Burden (2007) who reported that males reported
concentration, having confidence in their ability and desire to do well
as the major reasons for their school success whereas females
emphasized the effort and good behaviour. Similarly Hui (2000) in a
study on secondary school students in Hong Kong found that female
secondary students were more likely to refer to their lack of ability and
effort than their male counterparts.
On the contrary, not all studies on academic attribution of secondary students have reported gender differences. Hyde (2005) reported more similarities than differences in attributions of both boys and girls. No gender differences emerged on any of the success attribution scores in a study by Lloyd Walsh & Yailagh (2005). There were no gender differences in attributing effort as reason for their success in mathematics, nor in the lack of effort as a reason for failures. Further, ability was most prominent cause of success for both male and female students, rather effort was not given importance. Lightbody et al. (1996) found that males as compared to females put emphasis on external factor of luck whereas females stressed on the internal factor of hard work rather than males although earlier studies have emphasized on males using internal factor of talent and cleverness for explanation in their success (Chedzoy & Burden, 2007). Thus, in light of such contradictory findings on gender differences in Attribution, it’s difficult to conclude whether males are academically more resilient than females or it is the other way round.

Some researchers have proposed that the origin of cause and causality could be in developmental in nature (Normandeau & Gobeil, 1998; Zimmerman & Kitsantas, 1999; Flammer & Schmid, 2003; Mezulis, Abramson, Hyde & Hankin, 2004; Folmer et al., 2008). Normandeau & Gobeil (1998) argued that changes in causal attributions were related with metacognitive developments in children. They found that older children tend to report more internal, controllable and less stable causes in problem solving. Strong empirical evidence for age differences in attributional beliefs can be found from the meta analysis done by Mezulis et al., (2004) which revealed that children and older adults have stronger tendencies to make more internal, stable and global attributions for positive events than for negative events as compared to other age groups.

Flammer & Schmid (2003) in a study reported that adolescents often used specific abilities and strategies, intrinsic motivation for school performances as compared to children. Longitudinal work by Folmer et al., (2008) on 166 children and adolescents between 5-15
years of age have found developmental changes in children’s understanding of effort and ability in negative outcome situations. Younger children were not able to differentiate the meaning of effort and ability as compared to adolescents. Children make use of ability and effort to explain success (Frieze, 1980; Harari & Covington, 1981). A distinct type of ability emerges at the age of nine (Nicholls, 1979) with the advancement of age, ability attributions become prominent than effort for the explanations of success. Harari & Covington (1981) reported that children who put stress on effort for their success had persisted longer on the post test and thus solved more problems. A study done on third, fifth and eighth grade students of urban public schools. They were explored on confidence level, causal attributions and willingness to solve problems. Results indicated that males attributed success primarily to effort (Nicholls, 1984) and females attributed failure primarily to lack of ability and task difficulty more than males. They found that all students attributed failure to lack of effort.

Research on differences in academic attribution between achievement groups is relatively sparse with a supporting study (Lictt, Stadern & Swensoncynthia, 1989) which found that high achievers were more likely than low achievers to show self-serving bias in their attributions. Lot of studies has been done in academic attribution in western culture. Researchers have put emphasis on the socialization processes in the attributional beliefs among students. Cultural differences in academic attribution have been reported by many researchers (Hess, Chang, McDevitt, 1987; Hufton, Elliot & Illushin, 2002; Kivilu & Rogers, 1998; Mezulus et al., 2004; Parameswaran & Hom, 2000, Salili, Chiu & Lai, 2001).

On the contrary, few studies argue that there are more differences in attributional dispositions within cultural groups than across groups. Cultural convergence has been found between Russian and Western primary children in their attributions for school performance as well as their personal capacity for controlling school success (Little, Oettingen, Stetsenko & Batles, 1995) In a similar study by Little and Lopez (1997) found similarities across six socio-cultural settings (Los Angeles, Tokyo,
East Berlin, West Berlin, Moscow, Prague) in the developmental patterns of children. Effort, ability, luck, teachers and unknown factors were seen as causal attributions for school performance.

Societal values can shape the attributional styles among individuals. Hofstede (2007) along with Bond & Hofstede (1988) in a study of 23 countries found starked diffrences in value systems. They found that cultural values of Asian countries (China, Hong Kong, Taiwan, Japan, Korea) are based on long terms as they value persistence and striving (Hofstede, 2007). Studies confirmed that Asian students have stronger effort attribution. On the contrary Stipek, Weiner, Di (1989) reported no evidence to support that the Chinese emphasize on effort over ability as attributions in achievement scores as compared to American counterparts. The plethora of studies on attribution and academic performance across various developmental stages and culture throw light on the fact that students with a functional attributional style, i.e., the ones who attribute failure to unstable, specific and controllable factors, do better in academics than their counterparts. Such students can be expected to show more competence when faced with challenges to academic achievement.

In academic settings, a variety of RAT programs have been used in terms of attributional styles (content, delivery format and audience) (Forsterling , 1985; Perry et al., 1993, Weiner, 1988; Wilson et al., 2002). Researchers have focused that RAT encourages effort instead of ability attributions as explanations of failure, others seek to change ability to effort, i.e., from a stable to an unstable attribution that changes with time. Few seek to increase controllable attributions for negative life experiences (effort, strategy) or decrease uncontrollable attributions (test-difficulty, luck) (Weiner, 1985; 2006; Wilson et al., 2002). RAT can help focusing on controllable attributions as this functional attributional style helps in studying harder and as compared to lack of effort as causes of failure (Schunk, 1983). Dweck (1975) and Miller et al. (1975) have reported that RAT was effective in improving academic motivation and performance among elementary school students. Further in a study on underachieving students by Andrews
and Debus (1978) it was found that RAT not only improved the performance but also increased motivation, success expectations and controllable attributions and lowered uncontrollable attributions (Fowler & Peterson, 1981; Schunk, 1983). RAT has been found beneficial for students at risk of failure due to poor performance (Wilson & Linville, 1982; Van Overwalle et al., 1989), uncontrollable attributions (Struthers & Perry, 1996) and an external locus of control (Menec et al., 1994; Perry & Penner, 1990). In a study Anne & Elizabeth (2011) reported the efficacy of attribution retraining as a structured group counselling intervention on adaptive or non adaptive attributional style. Results confirmed that participants in the treatment group and adaptive group made adaptive attributions for an experimentally induced uncontrollable failure and showed lower levels of depressive mood than the non-efficacy adaptive group. The study confirmed the efficacy of attribution retraining. In a similar study, attributional retraining induced more internal attribution in students. Additionally quality of instruction and individual differences were considered in the development of attributional retraining programs (Menec et al., 1994). Few studies have focussed that effective teaching only does not have positive results for all students (Perry and Dickens , 1984; Perry & Magnusson, 1989). These studies have focussed that students with an external locus didn’t perform better with an effective or ineffective teaching rather when these students were given attributional retraining, they were found to be high on internal locus of control and had appropriate achievement striving.

Researchers also investigated the efficacy of multiple attributional retraining sessions, single session intervention, ranging from eight minutes (Perry & Penner, 1990)) to one hour (Van Overwalle & DeMetsenaere, 1990) and repeated sessions (Forsterling, 1985). Studies have confirmed that one retraining session was not sufficient for students with severe motivational deficit. Such students need repeated sessions of interventions to enhance their academic achievement (Abrami, Leventhal, & Perry, 1982; Perry & Penner, 1990). Research reported that students in the experimental group after receiving RAT
had significantly higher levels of internal attributions as compared to control group. Similar positive training effects for effort attribution were reported by Chaplin & Dyck (1976). They found that attribution retraining instruction helped in increasing scores in mathematics and attributions to uncontrollable factors decreased from pre and post test. Similarly in a study 303 students of 3rd to 6th grade were assessed for academic success or failure. The reattribution training method (Weiner’s attribution training model, strategies attribution and strategies guide) was used to enhance the students achievement motivation and academic achievement. ANOVA confirmed the findings as reattribution training method was effective in promoting the motivation level of school children and enhancing their academic performance in different classroom settings. Thomas and Pashley (1982) conducted a research on 162 children in classes for specific learning difficulties (SLD). They were given five week classroom attribution training program. Before training they displayed lower persistence, lower perception of ability and a helpless learning style but after attribution training program they reported increase in task persistence but no changes were seen in achievement attributions.

Thus, plethora of studies has assessed the efficacy of RAT programs in changing the causal attributions among students. In a study Hall et al., (2006) found a significant AR main effect for uncontrollable attributions, focusing that students who receive AR were less likely than no AR students to attribute their performance to uncontrollable causes after receiving 5 month AR treatment. Further no main effect was found for controllable attributions, concluding that AR retraining was more likely to reduce uncontrollable attribution than to enhance controllable attributions. Later Hall et al. (2007) repeated the same study and found that students receiving AR were less likely to attribute academic outcomes to uncontrollable cause than no AR participants. Perry et al. (2009) used MANOVA technique to study the effects of AR on four attributions (effort, strategy, quality of teaching and test difficulty). The study emphasized the controllable attributions (quality of teaching and test difficulty). Students in AR group were more
likely to had controllable attributions than their counterparts. Similarly Haynes et al. (2006) in a study used repeated measures longitudinal designs to examine pre-post AR changes in attributions in students. Results revealed increase in effort attribution in pre-post scores after receiving AR programs.

Attributional retraining is regarded as a therapeutic method for reinstating psychological control among students for improving their academic achievement. In a study by Perry et al. (1990) attributional retraining improved external, but not internal students performance on both the lecture and home-work tests. The findings suggested that cognitive factors influence a lot in student’s perceived control (internal/ external locus) and achievement. In a congruent study on attribution-based intervention VanOverwalle & DeMetseaere (1990) reported the effectiveness of two brief remedial programs on the academic performance of college entrants. The study was done in two parts, in the first study 43 students watched video-taped interviews with senior students relating to the causes of their failures at the beginning of the year and how they managed the failure and improved their scores at the end of the year. The findings highlighted that attribution based intervention (video-taped instruction) significantly increased the number of passed students at the end of the year as compared to the control group students who did not receive the treatment. In the second study, attributional intervention was compared with study–strategy intervention where students (N=57) were given strategies to enhance their learning difficulties. Findings showed that attribution change programs again showed significant increase in the number of passed students whereas learning strategy course had no effect on academic performance. Perry & Winberg (1993) reported that attributional retraining enhances students’ motivation and achievement striving by changing students thinking about their successes and failures. Students who are at risk are benefited with attributional retraining (Fosterling, 1985). In a similar study by Menec & Eichholz (1994) reported the efficacy of attributional retraining for low and high risk college students followed by a videotaped lecture by
effective or ineffective instructor. The results showed that attributional retraining with effective instructor enhances achievement of high risk students but the intervention had less significant impact on successful students and low achieving internals. Further attributional retraining induced internal attribution in students with an external locus and an increased expectation of future success in both internals and externals. In a longitudinal study Hall et al. (2006) examined the efficacy of attributional retraining on academic motivation and achievement of college students. Results showed improvement in students’ (experimental group) perception of control, success, emotions and overall academic performance as compared to students of control group.

Attributional retraining helps students who perform poorly by encouraging controllable and unstable perceptions of academic failure (Perry & Weinberg, 1993). Research has focused on the efficacy of AR programs in students with poor academic performance (Menec et al., 1994; Perry & Struthers, 1998; Struthers & Perry, 1996). AR techniques encourage students to adopt controllable and unstable explanations for academic failure such as lack of effort or a poor study strategy (Forsterling, 1985). Further, these modified attributions encourage motivation of students to use better strategy and enhances their achievement level, increased effort and improved performance (Schunk, 1990). Wilson & Linville (1982) in a study observed increased scores in GRE and GPA scores among college entrants by the end of the first year. This increased score was achieved with the help of RAT. Similarly Van Overwalle, Segebarth & Goldchstein (1989) reported increased academic success and achievement with the help of RAT. Intervention helped in higher GPA scores at the end of the academic year. Struthers & Perry (1996) in a study on RAT found that videotape presentation followed by small group discussion enhanced the academic motivation of students at risk and with stable-uncontrollable attributional style.

Earlier a study by Perry and Struthers (1989) compared several RAT techniques (written handouts, videotape, videotape along with
discussion) for at risk students having low levels of perceived academic success. Findings indicated that videotape and group discussion improved the grades of students low in perceived success. Later Ruthig, Perry, Hall & Hladkyj (2004) also compared the effectiveness of these AR programs. On the contrary to the above study, Perry & Struthers (1989) found all AR programs to be effective especially for overly optimistic students. The findings revealed that highly optimistic students were prone to academic failure, RAT helped them in higher GPA’s and lowered test anxiety.

In a study Hladkyj et al., (1998) found that AR enhanced performance and motivation of students who frequently used elaborative learning strategies. Further low-elaborating students suffered decline in academic motivation and performance after AR treatment. In a study by Weisz, Weiss, Han, Granger, & Morton (1995) on academic resilience, the findings confirmed that students high on self-belief, control, and persistence and low in anxiety are academically resilient. The multidimensionality of academic resilience holds implications for pedagogy because identifying specific facets of academic resilience enables more targeted intervention and support.

The above mentioned researches highlight the importance of attributions in Academic Resilience and how RAT can be used for enhancing Academic Resilience. The four components comprising Academic Resilience as used in the present research work are self belief, perceived control, persistence and anxiety. A brief review of researches that linked attributions to these four components is as follows:

**Self-belief** has also been linked to self-regulation, effort, persistence and achievement (Marsh, 1990; Schunk, 1990; Martin and Debus, 1998). Student’s persistence can be enhanced by focus on mastery (Nicholls, 1989; Qin, Johnson & Johnson, 1995). This could be achieved by showing students that effort and strategy are important ways to improve the academic level (Craven et al., 1991; Martin et al., 2001b). It is important to instill a strong self-belief in students to get academic success. Consistent with these findings, a positive self-
concept is valued as a desirable outcome in many disciplines such as educational, developmental, social, health, and personality psychology. Self-efficacy beliefs give the opportunity to students to motivate their learning through use of self-regulatory processes such as goal-setting, self-monitoring, self-evaluation and strategy use (Zimmerman, Bandura and Martinez Pons, 1992). Higher the levels of motivation and self-regulation in self-efficacious students, it produces higher academic achievement. Studies have focused on attributional style which has also been related to the development of self-concept. Failure to achieve success or failure to meet this demand might result in the negative evaluations of one’s own self. (Tony, 2003) Internal attributions for failure and external attributions for success have been found to serve as a means of maintaining an individual’s low self-concept (Weiner & Kukla, 1970; Weiner & Poteapam, 1970; Kukla, 1972; Wortman and Brehm, 1975). The helpless reformulation theory predicts that a pessimistic attributional style has been associated with loss of self-esteem (Weiner, 1979; Girodo; Dotzenroth & Stein, 1981; McFarland and Ross, 1982; Rothwell and Williams, 1983; Brewin & Shapiro, 1984). Studies have highlighted that self-efficacy beliefs have been found to influence scores (indices) of academic motivation in terms of choice of activities, levels of effort, persistence and emotional reactions. Bandura (1997) found that self-efficacious students are more willing to participate, work harder, persist longer and have fewer adverse emotional reactions when they encounter difficulties as compared to students who doubt their capabilities. In terms of choice of activities, self-efficacious students undertake difficult (challenging tasks more readily and willingly) than inefficacious students. Student’s mathematical self-efficacy beliefs have been found to be predictive of their choice of engaging in subtraction problems rather than in a different type of task. Higher the children's sense of efficacy, greater their choice of the arithmetic activity. Interestingly, Pajares & Kranzler (1995) studied the relationship between self-efficacy (Seigel, Galassi and Ware, 1985) and student’s anxiety reactions regarding mathematics. Although two measures were negatively correlated, only self-efficacy
was predictive of mathematics performance. It was also found that perceived self-efficacy for learning correlates positively with the student's success rate of arithmetic problems. (Schunk and Hanson, 1985; Schunk, Hanson and Cox, 1987). In addition, self-efficacy has been found to be highly correlated with students rated intrinsic interest in a motor learning task as well as in a writing revision task. (Zimmerman and Kitsantas, 1999) Further more, measures of self-efficacy correlated significantly with student's success in course work and perseverance (Lent, Brown and Larkin, 1984; Heckett and Bettz, 1989). Self-efficacy has also been positively related to self-rated mental effort and achievement during students learning from text material which was perceived as difficult. Perceived self-efficacy has also been found to influence student's method of learning as well as their motivational processes. (Schunk, 1981). The research confirms the findings of the mediating role of self-efficacy in motivating persistence and academic achievement student’s self-beliefs about their efficacy to manage academic task demands which can also influence them emotionally by decreasing their stress anxiety and depression (Bandura, 1997). A related variable to self-belief of student is Academic Self-Concept. Academic self-concept that has been found to act as both mediator and moderator in aptitudes has on learning and academic performance. (Chamorro-Premuzio and Frunham, 2006). Various studies (Marsh and Richards, 1988; Hattie, Marsh, Neil and Richards, 1997) confirmed that self-concept is a primary determinant of academic achievement. Valentine et al. (2004); Valentine & Dubois (2005) found that effects of prior self-belief were significantly stronger when the self-belief measure was based on academic self-beliefs rather than on global measures such as self-esteem. Control can be enhanced in students with the help of educators providing them rewards that are consistent with students work and ability (Thompson, 1994). Studies revealed that control can be developed by providing feedback in effective and consistent ways (Martin et al., 2001a, 2001b, 2003). Researchers have confirmed that RAT has impact on perceptions of control. It is found that controllable attributions give students a greater sense of personal
control over their academic performance as compared to uncontrollable attributions (Hall et al., 2004). The above research focused that RAT encourages an adaptive pattern of causal attributions (internal/unstable/ controllable) for dealing poor academic performance and thus subsequently enhancing perceived control. In a similar study by Haynes et al. (2006) focused on students general perceived control pre-post RAT. The paired t-tests indicated that students who received RAT experienced increase in their perceived control ability post RAT, while students in no RAT group didn’t experience any such change. Later Haynes & Perry (2008) repeated the same study with perceived academic control over the year whereas no such increase was seen in the control group students. The study concluded that RAT enhances both general and domain specific types of perceived control among students. An empirical study by Hall et al., (2006), examined the effectiveness of RAT for students with different types of perceived control. They found that poor performing students with a maladaptive profile of perceived control after receiving RAT outperform than their no –RAT counterparts. Struthers & Perry (1996) found that students who use unstable and uncontrollable attributions (professor quality) had lower perceived control than students who explained failure with controllable attributions. Struthers & Perry (1996) concluded that students who were classified as having an unstable –uncontrollable attributional mind-set benefitted most from RAT as compared to their control group counterparts. Such students who view themselves as responsible for their academic success & failure seem to have a sense of control over themselves (Dweck & licht, 1980; Stipek & Weisz, 1981, Willig, Harnisch, Hill & Maehr, 1983). In a longitudinal study of first year students, Perry et al. (2001) examined psychosocial student difference in classrooms, he found that students who felt “in control” upon their situation were more motivated, experienced less boredom and anxiety, used self-monitoring strategies, felt more in control of their course work, and obtained higher grades. Further, in a follow up study, Perry et al. (2005a) showed that students with high perceived control had better grade point averages (GPA’s) and withdrew from fewer
courses over a period of three years. Perry and colleagues conducted a series of laboratory experiments (Perry & Dickens, 1984, 1987; Perry et al., 1986) on college effective teaching. It was found that effective instructions produced better post-lecture performance than ineffective instructions but it was found only for high control students. For low-control students, effective instructions produced no better performance than ineffective instructions.

Craske (1985) in a study improved the persistence of learned helpless children with the help of reattribution training and observational learning. 65 students (5 & 6 class) were given unsolvable puzzle—completion problems to check the persistence levels, intellectual achievement responsibility scale and Raven’s Progressive Matrices were also given. Findings suggested positive correlation between intellectual achievement responsibility and persistence whereas intelligence scores were not related to persistence. Further 32 low persistent students were assigned to control and vicarious reattribution training groups. The findings suggested increased persistence in females, but not for male students. Alva, (1991) explored the relationship between academic success and persistence and concluded that there are many students who perform poorly (Dauber, Alexander & Entewisle, 1996), and there are significant other students who manage to do well in schools (Jimerson, Egeland & Teo, 1999). Perry and Penner (1990) proposed that RAT treatments can provide enriched learning opportunities for failure-prone students. It was found that students having external locus of control were more prone to academic failures, thus was in need of RAT as compared to students having internal locus of control (Rotter, 1966). Wilson & Linville (1982) developed RAT treatment to assess whether it could improve academic performance among vulnerable students. They recruited 40 undergraduate students with G.P.A less than 3.50. Further students were randomly assigned to RAT and no-RAT (control) group. It was concluded that a brief, one time exposure to RAT videotape treatment resulted in dramatic differences to students academic performance up to two years. Later However, a study by Jesse & Gregory (1986-1987) failed to yield the same performance or success
in GPA's among students who received RAT. Further Van Overwalle et al., (1989) selected college students who failed in economics mid term and assigned these students to either to RAT group or no-RAT group. Results indicated that students who received RAT attained higher grades than students who did not receive RAT. They concluded that RAT focusing the controllability dimension of causal attributions with an emphasis on effort and strategy attributions can be effective in helping failure prone students. Haynes et al., (2006) study found a significant interaction between RAT and optimism, they found that overly optimistic students who received RAT outperformed as compared to no RAT group.

Attributional style has been seen as cause of student’s anxiety in schools. Rodriguez and Routh (1989) found the relationship between trait anxiety and attributional style among learning and non-learning disabled elementary school students. Findings highlighted that anxiety was positively associated with a more positive, rather than a more negative, attributional style for both the groups. Further Bell-Dolan, Last & Strauss (1990) reported that trait anxiety as well as anxiety disorders in children were related with pessimistic attributional style. They showed internal, global and stable attributions for negative events (stress) than non anxious students. A study showed small but significant relationship between negative attributional style and trait anxiety. Girls were found higher on trait anxiety than boys, and attributional style and trait anxiety were strongly correlated for girls but not for boys (Kashani & Orvaschel, 1990). Anxiety is a condition of intense agitation, apprehension, tension, fear and worry, occurring from a real or perceived threat of imminent danger, which causes behavioral, psychological & physiological changes in both mind and body (Mayer, 2008). Anxiety is a normal response to everyday problems / moderate amount or levels of anxiety helps in better academic performance by creating motivation but testing and exams can produce anxiety among students, and can lower students' self-esteem & increase their fear of failure (Hardy, 2003). Researches confirmed that test anxiety has negative effect on academic achievement. Test-anxiety (Popham, 2003)
is characterized by cognitive (worry) and affective (emotionally) responses to the negative reactions resulting from performance on a test or in an evaluative circumstance (Deffenbacher, 1980). Students who suffer from high test anxiety necessarily do not lack intelligence or ambition, anxiety interferes with their academic performance (Everson & Millsap, 1991). It has also been found that classes in which students feel that the threat of evaluations is high make such students suffer from high test-anxiety will perform more poorly on tests than students with low or medium test anxiety (Sacks, 1999). Anxiety has a negative effect on performance (Smith, 1989). Number of factors contributes to the development of anxiety. One-factor is self-concept (Spielberger & Sarason, 1989). Worry of suffering results in the reduction of the self-image of oneself, leading to higher-anxiety (Friedman & Bedas-Jacob, 1997). Another factor is self-awareness. Also, other people’s perception of the individual have an impact on performance (Levitt, 1980). Classroom climate can be regarded as important factor. If all these factors are high then it would lead to high anxiety and further low performance. Consequently, low test anxiety level will lead to high performance (Smith, 1989). One of the studies (Mandler & Sarason, 1952) believed that high test anxiety interferes with performance; on the contrary high test anxiety helps to improve performance. Tobias (1979) found that high anxiety facilitates learning when the task becomes more difficult.

Bodas & Ollendick (2005) in a study focused on the moderating role of anxiety as a predictor of academic achievement in children. Results indicated that anxiety failed to moderate these relationships. A study by Anzi & Freih (2005) on 400 male & female students of Kuwait revealed significant positive correlation between academic achievements beyond the influence of IQ where as negative correlation was obtained between academic achievement & anxiety (Diaz, Glass, Arnkoff & Tanofskey-Kraff, 2001). In a study (Sarson, 1957) conducted among first, second & fourth year students, significant correlations were observed between anxiety & academic achievement. Mattar (1981) found that relationship between anxiety & academic achievement was
positive for scientific section students whereas negative correlation for literary section students. Similarly statistically significant correlation between anxiety & academic achievement was observed in males whereas for females, it was not significant. Othman (1975) found that academic achievement didn’t differ with anxiety; rather it differed with the variance of interaction between the level of anxiety & with the experimental situation.

A study by Chapell & Blanding et al. (2005) investigated the relationship between test anxiety & academic performance in 4000 undergraduate & 1414 graduate students & found a small inverse relationship between test anxiety & grade average. It was found that female undergraduates had significantly higher test anxiety and higher GPA’s than male undergraduates. Test (Zeidner, 1998). Hill & Wigfield (1984) found that about 25% of American primary and secondary school students, (10 million students) suffered lower academic performance due to test anxiety. Similarly Hembree (1988) found that test anxiety reduced academic performance at every educational level. Hancock (2001) in a study concluded that students with high test-anxiety showed significantly less motivation in classroom as compared to students with low test anxiety. In general, high test anxiety is more closely associated with lowered performance in school (Hembree, 1988).

In a study (Dua & Agarwal, 1998) showed that anxiety & academic achievement are negatively related. A study (Yousefi, Talib, Mansor, Juhari & Redzuan (2010) determined relationship between test anxiety & academic achievement. A significant negative correlation (r= -0.23) was obtained between test anxiety & academic achievement among adolescents. A significant difference (t= 5.47) was obtained between male & female adolescents where females score higher in their academic achievement. Eysenck (2001) found that test anxiety has huge impact on academic performance.

Rahimi (1999) in a study found 36.9% of high school students in Iran had severe anxiety. Later in another study by Daskzan (2004) found that 37% of males & 53% of females high school students had test anxiety. A significant relationship was obtained between test
anxiety & academic achievement. Keoghi et al. (2004) found that it was related to distraction & this has resulted in low academic achievement. Chapell, Blanding & Silverstein (2005) carried out a study on 5551 undergraduate & graduate Students in Pennsylvania & Illinois & found a significant difference on academic achievement among three different levels (Low Moderate & high) of test anxiety. Students with low test anxiety had higher academic achievement than students with moderate & higher test anxiety. Researches have concluded that there is a negative relation between high degrees of academic achievement & Low anxiety. Though certain degree of anxiety increases academic achievement, but if anxiety increases beyond that degree the reverse happens. On the basis of Yerkes–Dodson law, both the task difficulty & the level of anxiety must be taken into account. That is on difficult tasks low levels of arousal improve performance relative to high levels, but on easy tasks, the reverse is true (Reber, 1995).

Contradictory, negative correlation has been obtained between anxiety & academic achievement (Yi-Chun et al. (2007). Similarly Seipp (1991) found a negative correlation (r= -0.21) between test anxiety & academic performance. Anxiety has been found to interfere with achievement in school settings (Goetz, Preckel, Zeidner, Schleyer, 2008) & it has also detrimental effects on the academic performance of undergraduates (Chapell et al., 2005). Covington (1992) reported that fear of failure underpins students’ anxiety. Fear of failure can be reduced by promoting classroom climate of cooperation, self-improvement and personal initiative (Qin et al., 1995). Further practice tests, encouraging effective study and planning, developing test-taking skills, encouraging relaxation techniques up to the day of test can reduce student’s test anxiety (Covington, 1992). Various researchers have bifurcated the students on the basis of need achievement model of motivation (success-oriented students, the failure-avoidant students and the failure-accepting student) (Atkinson, 1957; McClelland, 1965; Corlington & Omelich, 1991; Covington, 1992). These authors have concluded that success oriented students tend to be optimistic, they adapt proactive and positive orientation to their studies and face the
setbacks with energy and optimism (Covington & Omelich, 1991; Martin, 1998, 2001) whereas failure–avoidant students tend to be anxious and are high on fear of failure (Alpert & Haber, 1960). These students lack academic resilience. They are uncertain about their ability to avoid failure or achieve success (Covington & Omelich, 1991). Further these students are adversely affected by setbacks and stressful situations as they doubt their ability and have lack of control whereas failure-accepting students lack both motivation and academic resilience (Abramson, Seligman, & Teasdale, 1978). Number of studies have focused on fear of failure as primary factors leading to anxiety among students (Covington, 1992; Martin & Marsh, 2003). Research has suggested that fear of failure can be reduced by the belief that effort and effective strategy enhance performances and does not imply lack of ability or intelligence (Covington & Omelich, 1991). Further striving to rework students’ views on success in terms of personal progress and improvement (Covington, 1992). Studies highlighted the fact that these factors in combination reduces students’ anxiety (Martin & Marsh, 2003).

Anxiety is also associated with substantial negative effects on children’s social, emotional & academic success (Essau, Conradt & Petermann, 2000). Indian studies have documented that main cause of anxiety among school children & adolescents is parents’ high educational expectation & pressure for academic achievement (Deb, 2001). It was found that adolescents from Bengali medium Schools were slightly more anxious than their English medium counterparts (Annamalai, 2004). Relationship between anxiety and academic performance has been described in a number of findings relevant to the understanding of adolescents (Phillips, 1978, Sarason, 1980, Tobias, 1979).

Research suggests that test anxiety is a serious problem in the high Schools which affects millions of students. Girls are affected more than boys. In general females have been found to have high levels on test anxiety than males & higher level of others (Hill, 1984). Hembree (1988) revealed that females display higher test anxiety than males at
all grade levels & that males & females react differently in a testing situation. Females report feeling more uncomfortable, self-conscious and worried in testing circumstances than males. Overall, females are more likely to take an evaluative situation as a threat while males are more likely to take it as a personal challenge (Reyes, Gillock, Kobus & Sanchez, 2000). Males are found to display moderate anxiety & females are more likely to display high anxiety in testing circumstances (Couch, Garber & Turner, 1983). Some researches postulated that females encounter greater test anxiety as compared to males because society has different expectations for each gender (Ryckman & Peckham, 1987). Children who adhere to societal norms & values identify activities to be either. Studies have found that female students have significantly higher test anxiety than male students (Ginter, Scalise, Mc Knight & Miller, 1982, Hojat, Glaser, Xu, Veloski & Christian 1999).

Females outperform males academically because they are more conscientious & dedicated to their school work while males perform better in sports because that shows their masculinity (Luciew, 2010). Roderick (1995) in a study suggested that high school new students have to adjust to stressful academic settings which include increased pressure to accomplish new & unfamiliar tasks, more intense academic demands & failure experiences. Students in all classes experience perform more poorly on test than they should because anxiety interferes with their ability to excel (Everson, 2005). Study concluded that students are confronted with unfamiliar academic stressors which can negatively affect their health & well-being (Newman, Lohman, Newman, Myers & Smith, 2000).

Thus, as evident in the above mentioned researches positive and negative attributional styles have significant implications for determining self-belief, perceived control, persistence and anxiety of students. RAT plays a very important role in enhancing self-defeating beliefs further improving belief system, perceived control, persistence and reducing anxiety levels of students who exhibit a pessimistic attributional style.
ACADEMIC RESILIENCE AND OTHER RELATED VARIABLES

Martin & Marsh (2006) examined the educational and psychological correlates of academic resilience on a sample of 402 Australian high school students. Analysis showed that five factors predicted academic resilience: self-efficacy, control, planning, low-anxiety, & persistence. Further path analysis showed that academic resilience predicted three educational outcomes: enjoyment of school, class participation and general self-esteem. Academically resilient students have high levels of achievement motivation and performance despite stressful conditions (Alva, 1991). Schunk & Miller (2002) in a study found academic self-efficacy as a significant predictor of academic resilience. High academic self-efficacy handles student’s negative beliefs and their academic capacities (Bandura, 1997) and developing skills in effective goal setting (Locke & Latham, 2002). In a study Waxman et al. (2003) reported that resilient students were found to have significantly higher perceptions of involvement, task-orientation, satisfaction, rule clarity than non-resilient students. Also, significant differences emerged between the two student groups (resilient & non-resilient) on their academic aspirations. (Waxman et al., 1997). Resilient students reported significantly higher social self-concept, achievement-motivation and academic self concept than non-resilient students. However, no significant differences were observed between the two groups on variables such as parent involvement, home-work and teacher support.

Level of intelligence has been found to play a crucial role in resilience (Condly, 2006, Doll & Lyon, 1998). Literature suggests that average or above average intellectual development supports resilience. Although majority of studies (Tiet et al., 1998. Werner, 2000) view higher levels of intelligence as a protective factor, but a study by Luthar (1991) found that higher intelligence might also function as a risk factor. The differences in such findings may differ depending on the outcomes being investigated such as psychological adjustment or school achievement, measures used (e.g. teacher ratings diagnoses),
and subjects studied (age, economic status, ethnicity). Teachers &
schools who communicate high expectations provide rich, learner-
curriculum & real-life problems (Wang, Haertel & Walberg, 1998),
encourage students involvement (Waxman et al., 2003) contribute a lot to
educational resilience. Studies on personal protective resources for
Academic Resilience have confirmed that students who do well in the
classroom show a positive self evaluation of their academic status at
school (Wylie, 1997). The plausible reason for the high academic
achievers was that because such students believed in their own
capabilities to achieve success. Studies on environmental Protective
Resources for Academic Resilience focused on the effect of positive
school environment on students academic performance. School
environment may provide both protective factors which diminish school
failure & risk factors which lead to even failure for students (Cefai,
2007). It was concluded that belongingness, active engagement,
recognition & positive belief and expectations were the key factor in
promoting resilience in classroom. Wayman (2002) in a study divided
educational resiliency factor into personal factor and environmental
factor. Personal factor include internal attributes viz enthusiasm and
to work & environmental factors are associated with external influences
which foster students’ resilience such as positive family relationship,
teacher & peer support. The positive impact of a teacher supporting a
student has been found to have a significant role in promoting
educational resilience (Gordon & Mejia, 2006) because supportive
teacher have been found to create a learning environment for students
who are at risk of academic failure to enhance their learning outcomes.
Gandara (1982) conducted a study among successful Mexican
American Professionals and found that 93% of the professionals
surveyed reported that the educational support received from parent
during childhood and adolescence was the single most important factor
affecting their high academic goals & expectations Family is regarded
very important factor in the development of resilience in students
(Siantz, 1997). In a study on protective factor by Bernard (1993), it was
recommended that school climate help in fostering the development of
resilience among students. Many schools, families, and their communities protect those who are growing up in adverse situations by providing an environment that is caring and supportive, positive & provides continuous opportunities for participation. These factors are important in the lives of the resilient students. Bernard (1993) also found that schools which establish high expectations for all students and give them necessary support, have significantly high rates of academic success. When students are motivated to get success in variety of areas such as arts, sports, community service, apprenticeship and helping peers, it shows out to the students that their strengths are desired and valued by the school.

Henry and Milstein (2004) identified several ways in which students might respond to adversity in school and life events. The first is the dysfunctional response where students feel overwhelmed and choose to withdraw from the situation. Second in the survival response, students learn to survive and respond in ways that are least successful and continue to struggle. Third is the comfort zone response with persistence and learning more adequate responses, students will return to where they were before the challenges came their way. Last is the resilient response; disruptions that result in new skills, new insights from their environment to increase resiliency.

Werner and Smith (1992) conducted a longitudinal study on high risk groups facing academic failure. These students often face problems caused by poverty, health, and other social conditions that have made them difficult to succeed in school. They discovered several differences when comparing with at-risk kids who did develop serious problems. Results were separated into three types of protective attributes that supported resilience (a) dispositional attributes of the individuals (b) affections ties with the family (c) external support system in the environment. Plethora of studies focused on resilience in terms of broader life events.(resilience to disadvantaged background, poor parenting, family break-up, mental illness, drug addition etc.) in Australia (Fuller, 2000; National Crime Prevention, 1999., Shochet and Osgarby , 1999) and in other countries (Davis and Paster, 2000)
Gilligan, 1999., Lindstroem, 2001; Slap, 2001). School is an important place where resilience in young people can be enhanced (Frydenberg, 1999; Speirs and Martin, 1999; Fuller, 2001; Parker and Hendy, 2001). However, studies on resilience are more focused on young people’s mental health and well being and less on academic development. Resilient children who are high on emotional well being and mental health under stressful situations had more self-esteem than their less resilient counterparts (Buckner, Mezzacappa & Beardslee, 2003, Masten & Coatsworth, 1998). Self-esteem is also negatively associated with the propensity to initiate risky health behaviors among adolescents; resilient teens had higher self-esteem than non-resilient adolescents (Rouse, Ingersolle & Orr, 1998).

Neihart (2002) in a study concluded that resilience addresses the social & emotional needs of gifted & talented individuals, (Cross, 2001, Neihart, Reis, Robinson, & Moon, 2002). Peterson (1997) reported studies of emotionally bright, tough & resilient abused and neglected children. Studies (Werner, 1990; Friborg, Hyemdal, Rosenvinge Martinuessen, 2003) reported that resilient individuals easily adapt & adjust quickly to major life events. Resilience is much needed to deal with stress (Beasley et al., 2003) related to academics and other stressful situations such as parental avoidance, during adolescence, divorce & university commencement (Tusaie & Dyer, 2004; Campbell-Sills et al., 2006, Urquhart & Pooley, 2007). Individuals experiencing such stressors manage to overcome them, reportedly achieve above average levels of psychosocial functioning, academic success, career development, physical well being are considered resilient (Tusaie & Dyer, 2004). Walker, Gleaves & Grey (2006) also emphasized on the importance of resilience in higher educational contexts. Therefore enhancing Resilience among students should be a matter of great importance to educational institutions. This would enable students to face adverse circumstances with confidence and excel in life. The aforementioned studies indicate that a lot of research has been done on factors related to Academic Resilience. Both internal as well as external
factors are crucial in ascertaining the level of Academic Resilience in students.

**ACADEMIC STRESS AND RAT**

Stress in students is increasing (Peden, Rayens, Hall & Beebe, 2001). Sax (1997) found that 97% of college students report frequent depression. European studies show that only 8% of 18-21 year old German students enroll in university and that 30% leave before obtaining a degree, most during their first year of studies (US Library of congress, Federal Research & Division, 1995; OECD, 1998; HIS, 2005). Austrian, French and Dutch studies reveal comparable patterns of academic failure and withdrawal (Brandstatter & Farthofer, 2003; Vanden Berg & Hofman, 2005). Attributions play an important role in academic stress. An individual’s attributional style is closely linked to academic stress. Attributional or explanatory style is a person’s way of explaining the causes of positive and negative events in their life (Peterson & Steen, 2002). Depressive or pessimistic attributional style is related with negative events (stress) (Abramson, Seligman, & Teasdale, 1978). Attributional style is directly linked with academics; a positive attributional style is related to high academic achievement, positive adjustment and thus related with low academic stress (Glasgow, Dornbusch, Troyer, Steinberg, and Ritter, 1997; Peterson & Steen, 2002). In a study by Glasgow et al.(1997) found that dysfunctional attributional style is negatively related to academic performance. Similar trend was highlighted by Peterson and Barrett (1987). Attributional styles can determine the selection of courses of students (Maftin, 1987; Nieva & Gutek, 1981; Zuckerman, 1980). Students with dysfunctional attributional style have difficulty in making adjustment and achieving success in academics as compared to the one with functional attributional style. RAT can help in changing attributional style (Forsterling, 1985; Heller & Zeigler, 1996; Luzzo & Funk, 1996; Perry & Penner, 1990; William, 1997) thus lowering academic pressure and stress. Students suffering from high levels of stress or depression
can be benefited from RAT as these students can be thought to have a sense of control and improved academic functioning (Evans, 1981).

Plethora of studies has reported that attributions for success and failure are significantly related to achievement activities. Functional and dysfunctional attributional styles are important predictors of academic stress. Researchers investigated the relationship between different types of attributions and academic stress, coping efficacy and academic adjustment in medical students. The researcher analyzed 442 subjects from two medical schools in Korea. The findings depicted that students with higher scores on internal attribution tendency and coping efficacy reported low academic stress and better adjustment at medical school. The study further revealed the gender differences also. Males scored higher on academic adjustment, had internal attribution tendency and good coping and were low on academic stress as compared to their female counterparts. Internal attribution was negatively associated with academic stress (Ahn et al., 2007; Kim & Jeon, 2008). Morris and Tiggerman (1999) conducted two series of longitudinal studies and found significant and positive correlation between the generality dimension and the specific performance outcome measures. In a similar study by Houston (1994) high achieving students, low on stress tend to make stable and global attributions for negative academic settings, thus making them more vulnerable to academic stress. Peterson & Barrett (1987) reported that university students who showed a negative attributional style, when these students were under stressful situation like lesser grades termed it to the internal, stable and global factors, thus they were found to be high on pessimistic attributional style whereas students with positive attribution do not show depressogenic style. In contrast Tiggemann & Crowley (1994) did not find any relationship between academic attributional style or attributions and academic related performance and pressure. They conducted a study on Australian University students but the study did not yield significant results. Further Houston (1994) found that students having stable and global attribution style performed well in academics.
Thus, a pessimistic attributional style interacts with a negative academic event (stress). Fincham, Hokoda, and Sanders (1989) found that stability attribution predicted academic performance in 3rd and 5th grade students. Children’s causal explanations of academic success or failure significantly influence the academic performance. Thus it can be inferred that self defeating attributions can have detrimental effects on academic performance making students more vulnerable to academic stress. Students who are more prone to academic stress because of their dysfunctional attributional style can be helped to modify their attributions using RAT as an intervention; the students can be made to perceive success, failure outcomes in academics from a new perspective. They can be encouraged to make unstable specific and controllable attributions for failure. This can help them in better performance in subsequent task and cope effectively with their academic stress.

Kauts & Sharma (2009) conducted a study on academic performance in relation to academic stress on 800 adolescent students (159 high stress students and 142 low stress students). They were further divided into experimental and control group and further they were assessed on the pre-post scores of Maths, Science and Social Studies. They were then given yoga training to assess its effect on academic performance in relation to stress. The results showed that the students who practiced yoga performed better in academics. Further low-stress students performed better than high stress students. Few studies reveal that even low to moderate levels of stress can hamper academic growth (Steers, 1984; Mottowildo, Packard, Manning, 1986). Researches revealed that stress affects the overall academic performance (Hockey in press; Silver, 1968) which may further lead to withdrawal from studies (Hirsch & Keniston, 1970; Katz et al., 1968). In a study by Felsten & Wilcox (1992) on impact of high levels of stress on GPA among 146 college students. They found that high levels of stress reduced GPA and led to increase in psychological and somatic symptomatology. In one study, it was found that a week program of yogasans and meditation lowered the aggressive behaviour of students.
Whereas another study (Iniew Sumanna, 1998) reported that meditation reduced problems related to maladaptive behaviors increased emotional and physical health and psychological well being, reduced the frequency of thought, reduced substance abuse and generally improved the quality of life (Dua et al. 1998).

Research done on stress levels experienced by high school students by Chin (2005), Gadzella (1991) found that a planned intervention program can prevent stress among students. Morris (1990) reported that high school students always face academic stress in school as they have to work for better grades. Thus, Transcendental meditation has been found to reduce stress (Michaels, Huber, & McCann, 1992) and improve academic performance (23, 24, 25, 26, 27, 28, 29, 30, 31, 32). ‘Om’ chanting helps in increasing levels of alertness (Telles, Nagarathua & Nagendra, 1995) and practice of yoga has been found to improve the levels of competitive performance (Sharma, 2002). Research conducted by Mind/Body Institute, Harvard Medical (Goldberg, 2005) school and University of Kentucky revealed a positive influence of meditation on brain functioning and performance (Motluk, 2005). Researches revealed that the students who experienced yoga module performed better in their school settings and in overall academics (Sharma, 2002). Another study found that yoga techniques were helpful in the management of anxiety and improved the level of concentration (Sahasi, Mohan & Kacker, 1989).

Ample research empirically demonstrates that attributional training enhances academic performance and reduces academic stress. Wilson and Linville (1982) showed that administering AR resulted in better GRE scores and GPA’s among first year college students studies (Overwalle and de Metsenaere (1990), Overwalle and Segebarth and Goldchstein (1989) carried out a study on college students revealed that AR treatment emphasized controllable achievement stunning behaviours which produced academic success and showed that AR students performed better in comparison to no AR students on final exams. In several studies (Perry et al., 1990) it has been demonstrated that college students who received AR performed better than a no-
treatment group on achievement tests (Perry and Penner, 1990, Menec et al., 1994) and or psychology grades (Hall, Hladkyj, Perry and Rulhig, 2004, Hall, Perry, Chipperfield, Cliflon and Haynes (2006), Struthers & Perry, 1996). Other benefits of AR include effective aging, group counseling (Green Emruh & Altmaer, 1991), athletic achieving (Miserandino, 1998) and job satisfaction (Curtis, 1992). Despite the widespread applualions of AR as an intervention, there has been a limited documentation regarding the cognitive mechanism of change underlying AR in terms of attributions and perceptions of control (Perry et al., 1993). AR intervention has been found to enhance the use of adaptive cognitions. It positively affects students’ academic achievement (Ref articles 8). AR enhance control as all students who received the AR treatment (low and over optimists alike) increasingly attributed academic performance to a controllable cause (effort) overly optimistic college students who didn’t relieve AR increasingly attributed their academic performance to cause beyond their personal control, playing them at greater risk of future low motivation, poor academic performance and academic attribution (Perry et al., 2005; Ruthig et al.,2004). As students begin to attribute academic performance to controllable causes they begun to feel more responsible for their academic outcomes (Werner, 1994, 1995) students who develop proactive academic behaviors are more likely to have successful academic outcomes than are students who do not develop these behaviors (Perry et al., 2005). The efficacy of AR as a structured group counseling intervention was tested with participants being classified as having either an adaptive or non adaptive attributional style. Participants were divided into 3 groups: Adaptive group, Non adaptive group, Treatment group (non adaptive attributional style participants who received treatment involving attribution retraining). Results indicated that participants in the treatment group made relatively mere adaptive attributions for an experimentally induced incontrollable failure and lowered levels of depressive mood than non adaptive group. Thus, it is evident that enhancing Attributional style can reduce the level of Academic Stress among students. Optimistic attributional style
makes those prone to academic stress, feel less pressure which further enables them to persist in times of adverse circumstances.

**ACADEMIC STRESS AND RELATED VARIABLES**

Incidents of suicide are increasing every year due to academic pressure especially in senior secondary students. Statistics show that India has the highest suicide rate in the world. 95-100 people commit suicide in India everyday and out of these 40% are in adolescent age group. Douglas, Collins & Warren et al (1997) reported that in a National College Risk Survey, 10.3% of students had serious thoughts of suicide. Thus, it becomes important to handle academic stress at school level (Sarafing & Ewing, 1999). Number of studies have found a strong negative correlation between self-efficacy and stress (Hacket et al. 1992, Gigliotti & Huff, 1995; Solberg, Hale Villareal, 1997; Torres & Solberg, 2001). Academic self-efficacy has been found to be positively associated with grades in college (Brown Lent & Larkin, 1989; Multon Brown & Lent, 1991; Bong, 2001). Hackett et al' (1992) suggested that stress & anxiety have been found to decrease the self-efficacy judgments of students. Madani in a study found significant and negative relation between academic stress and self-efficacy moreover different aspects of self-efficacy e.g. social resources, social self-efficacy, self-assertive efficacy and meeting other’s expectations were found to have negative correlation with academic stress (Wood et al, 2008). In a study of gender differences on academic stress and academic achievement in secondary class students, the research concluded negative relationship between academic stress and academic achievement. However, mean differences between boys and girls failed to reach the level of significance. Boys were more frustrated than girls, whereas girls were found to be more anxious than their boy’s counterparts in academic situation. They received more academic pressure than boys. (Gupta et al., 2011).
In an attempt to study the type of role stress present among the engineering & management students in India, it was found that role overload role stagnation, & self-role distance were the major stressors experienced by students. The study observed no significant difference emerged on any of the role stressors between first & second year students or between management & engineering students. However, it was observed that male students experience more role stagnation than females (Agarwal & Chahar, 2007). Piekarska (2000) concluded that the essential factors for the formation of stress prevails between the results of stress and psychological and personality characteristics. Towbes and Cohen (1996) examined the frequency of chronic stress in the college students and found that with regard to chronic stress, first year students scored higher than other students. Going on the similar lines, Rocha Singh (1994) examined sources of stress among undergraduates and revealed that the most significant academic stressors reported were stress that are time-specific or subject specific which were further supported by Carroll's (1963) contention that learning is a function of time allowed aptitude, quality of instruction and ability to understand instruction. These academic stressors were found to be relatively unchangeable over time, as also reported by Murphy and Archer (1996) who compared the students’ previous study with eight years later study on academic stressors (Archer and Lamin, 1985). Researches conducted in the past revealed that collegiate stressors included academics, social relationships, finances, daily hassles (e.g. parking and being late) and familial relationships (Larson, 2006). Time demands and new responsibilities in above domains were linked with stress. Students who were high achievers felt more stress than low achievers as maintaining the grades and ranks was quite stressful (Rothman, 1995). Similarly many high school students suffer from very high levels of stress due to academic pressures. The impact of stress on students is paramount and studies have shown that it hinders academic growth and academic success (Garret, 2001; Murff, 2005). National Survey by American College Health Association (2004) on 13, 500 college students found that 45% reported depression and had difficulty in functioning and 94
% reported feeling overwhelmed by number of tasks. Research suggested that college students often feel lots of stress in achieving success in academics so due to academic pressure, they may turn to substance abuse (Douglas et al., 1997); depression, suicidal ideation and suicidal attempts (American College Health Associations, 2004); relationship problems and issues with sexual identity (Kisch, Leino, & Silverman, 2005). Fariza (2005) conducted a research on stress among high school students found that school students have to deal with the academic pressures and societal demands from parents, teachers and the society. In a similar study done by Mates and Alisson (1992) found that among the contributory factor in academics was the students achievements in academics.

Exposures to high amounts of stress have been linked to “anxiety, aggression, depression and academic underachievement (Reidy, 2002). Numerous studies have indicated that stressors affecting students are due to the pressures and expectations of the school environment. Several students work hard to get good grades in their courses work (Reidy, 2002). In a study researchers reported that lower grades are the major source of stress among students (Kohn & Frazer, 1986; Evans & Fitzgibbon, 1992). It was concluded that high stress can hinder students’ concentration and performance level whereas positive stress can be helpful to students by motivating them for peak performance (Pfeiffer, 2001). Students who have fear of failure in relation to their grades and academic achievement were found to be high on rejection and low self-esteem (Schafer, 1996). The studies conducted on medical students found that heavy work load, deadlines and assignments were the common causes of stress among students (Kohn & Frazer, 1986; Evans & Fitzgibbon, 1992). Academic stress tends to put impact on mental and physical health and the ability to perform school work effectively (Clark & Rieker, 1986; Felsten & Wilcox, 1992). This study was further supported by Greenberger (1981) Lesko, & Summerfield, 1989). Academic stress was related with negative outcomes as depression (Aldwin & Greenberger, 1987) and poor academic performance (Linn& Zeppa, 1984). A number of studies have found
positive relationship between stress and poor academic performance (Clark & Rieker, 1986, Linn & Zeppa, 1984; Struthers, Perry & Menec, 2000). Further Aldwin & Greenberger (1987) found significant positive correlation between academic stress and anxiety and depression among college students. In a similar study by Struthers et al., (2000) reported that high level of academic stress was negatively associated with lower course grades. Academic stress was found to have a detrimental effect on students’ academic performance. On the contrary Felsten & Wilcox (1992) found significant negative correlation between stress levels and academic performance of college students. Similarly Blumberg & Flaherty (1985) in a study also found an inverse relationship between self-reported stress level and academic performance. Womble (2003) in a study on impact of stress factors on academic performance of college students found no correlation between the perceived stress and GPA's, though review of literature showed correlation between academic performance and academic stress. Students experience high level of academic stress due to exams, assignments, time pressure, grade pressure (Beck and Srivastava 1991; Kleehamner, Hart and Keck, 1990, Lindop, 1991). Beck and Srivastava (1991) found that high school students suffer from long hours of study, multiple assignments, lack of free time, lack of timely feedback and lack of faulty response to their needs. Further, Hamill (1995) found that high school students often have difficulty adjusting to the academic environment of the high school. Students indicated that the practical and lab work in high school is the most stressful (Mahat, 1996, Kleehamner, Hart and Keck, 1990, Admi, 1997). Pagana (1988) in a study surveyed 262 high school students and found that personal inadequacy and fear of making mistakes were constant stressors. He also found that time management problems were the source of stress. In another study Bell (1991) found that anxiety and stress could interfere with learning a complex, psychomotor skill whereas other studies identity social factors as a major stressors in high school students (Lengacher, 1996; Green, 1987; Beck, 1995). Evidence suggests that even low or moderate levels
of stress can interfere with task performance (Steers, 1984; Motowidlo, Packard & Manning; 1986).

Researches on age level in academic stress indicate that an individual’s age may have a strong influence on his or her perceived stress level. Whitman (1985) in a study suggested that younger students experience many stressful changes in their lives as transition from home to school is quite stressful. Additionally, the academic expectations in school and college can be challenging. The pressure to acquire good grades can hamper self-esteem. Sometimes these students are more prone to test and computer anxiety. Green (1987) in a study concluded that older students had to deal with decisions about career commitment, alterations in family relationships and planning for financial security. They often have more roles that compete for their time and energy.

Further gender based research on academic stress supports that gender can have an affect on level of perception of stress (Lengacher, 1993; Sarafino and Ewing, 1999, Misra and McKean, 2000, Hudd et al., 2000; Peden et al., 2001). Females reported higher level of self-imposed stress and reported more physiological reactions to stressors than males (Hudd et al., 2000; Misra and McKean, 2000) Further Mc Bride (1997) found that females have been socialized as good females and not to be self-reliant females. They are expected to depend on others and look for approval. Whereas Misra and Mc Kean (2000) believed that men report lower levels of stress as they have been socialized to be self-reliant and to behave in a masculine way. Gadzella (2006) conducted a research on stress level in female students. Researches on the difference in stress level in sexes are usually conducted directly or indirectly. Gadzella and Baleglu (2001) found that female students experience stress during changes in their life whereas Shah (1993) found that there is a significant difference bet stress experienced by male and female students and Jafri (1991) showed that female students experience more stress when faced with problems as compared to male students.
RAT AND OTHER RISK FACTORS IN STUDENTS

Empirical studies have focused on a wide range of aptitudes which make students vulnerable to low perceived control. Students report of anxiety have been negatively associated with perceived control whereas enjoyment has been positively associated with perceived control (Ruthig et al., 2008). Such type of students can be trained with the help of RAT. RAT can be helpful in the causal search process as suggested by Weiner (1979, 1985). Causal search tends to occur after unexpected, negative or important events (failing a test) (Gendolla & Koller, 2001; Kanazawa, 1992). The findings suggest that RAT may be quite helpful for students engaged in high levels of causal search as these students perform poorly (Stupnisky et al., 2006).

Some researchers have focused on personality factors which have direct influence on perceptions of control (Tong et al., 2006). Neuroticism was negatively associated with reduced perceptions of control, whereas conscientiousness was positively associated with perceived control (Gunthert et al., 1999). Findings highlight the fact that RAT can be beneficial for students high on neuroticism whereas RAT may not be useful for conscientious students who are less likely to have low perceptions of control. In school settings, RAT has been found to be effective in improving academic motivation and performance among students (Dweck, 1975; Miller et al., 1975). The findings highlighted the efficacy of RAT in increasing motivation, self-efficacy, success-expectations and controllable attributions (Andrews & Debus, 1978; Fowler & Peterson, 1981; Schunk, 1983). RAT was also beneficial in reducing aggressive behaviors in classrooms (Hudely et al., 1998) and for children with learning disabilities (Robertson et al., 2000). AR research on middle and high school students show that AR programs can increase perceptions of control, persistence and achievement (Heller & Zeigler, 1996), especially for failing or depressed students (Dieser & Ruddell, 2002). Research by Heller, Ziegler and Colleagues further highlighted the effectiveness of short AR programs (videotape...
techniques) for gifted female students in the natural sciences (Heller, 2003; Zeigler & Stoeger, 2004). AR also plays a crucial role in resolving group discipline problems (Lapointe & Legault, 2004) and assisting with career-related decision making (Szabo, 2006).

Thus, research in school setting highlighted that RAT can benefit students who are vulnerable in terms for perceived control, maladaptive attributional mindset, unsatisfactory performance and over-optimism. Research suggests that RAT is quite beneficial for such types of students. Thus, an attempt has been made in the preceding pages to review the available literature related to variables being explored in the study. Following this brief review of relevant literature in the context of selected variables for the present investigation, the following hypotheses were framed for further investigation.

**HYPOTHESES**

1. Adolescents with high academic resilience would show dysfunctional attributional style as compared to those with high academic resilience.

2. Adolescents with high academic stress would exhibit dysfunctional attributional style as compared to those with low academic stress.

3. RAT would enhance attributional style of adolescents.

4. RAT would reduce academic stress of adolescents.

5. RAT would enhance self-belief of adolescents.

6. RAT would enhance perceived control of adolescents.

7. RAT would enhance persistence of adolescents.

8. RAT would reduce anxiety of adolescents.

9. Post intervention scores on attributional style (locus of control, personal control & stability) and academic resilience (Self-
belief, Perceived control and Persistence) among adolescents in experimental group would be significantly higher than their pre intervention scores.

10. Post intervention scores on anxiety and academic stress among adolescents in experimental group would be significantly less than their pre intervention score.