<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AMU</td>
<td>Aligarh Muslim University</td>
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<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
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<tr>
<td>df</td>
<td>Degree of freedom</td>
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<tr>
<td>GER</td>
<td>Gross Enrolment Ratio</td>
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<td>GOI</td>
<td>Government of India</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<tr>
<td>JK</td>
<td>Jammu and Kashmir</td>
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<tr>
<td>M</td>
<td>Mean</td>
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<td>MEII</td>
<td>Mangal Emotional Intelligence Inventory</td>
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<tr>
<td>N</td>
<td>sample size</td>
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<td>NCERT</td>
<td>National Council for Education Research and Training</td>
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<td>NPE</td>
<td>National Policy Education</td>
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<td>P</td>
<td>Probability</td>
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<td>POA</td>
<td>Programme of Action</td>
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<td>RGNF</td>
<td>Rajiv Gandhi National Fellowship Scheme</td>
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<td>SC</td>
<td>Scheduled Caste</td>
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<td>SD</td>
<td>Standard Deviation</td>
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<td>SES</td>
<td>Socio-Economic Status</td>
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<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<td>ST</td>
<td>Scientific Temper</td>
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<td>STP</td>
<td>Science and Technology Policy</td>
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<td>UPA</td>
<td>United Progressive Alliance</td>
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CHAPTER - 1

INTRODUCTION
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INTRODUCTION

Education is an attempt on the part of the adult members of the human society to shape the development of the coming generation in accordance with its own ideals of life. It is an effort to secure for everyone the conditions under which individuality is most completely developed. Under such conditions, the attributes of ideal manhood or womanhood are developed. In the words of John Dewey (1916) education is, “the development of all those capacities in the individual which will enable him to control his environment and fulfil his possibilities”. Education acts as a catalyst for all round development of an individual. Education liberates an individual from ignorance, poverty and misery by equipping him with the knowledge and employable skills, which makes him economically independent and well adjusted in society. Education is regarded as a potential instrument of national development. In this era of globalization and technological revolution, education is considered as the first step for every human activity. It plays a vital role in the development of human capital and is linked with an individual’s well-being and opportunities for better living (Battle & Lewis, 2002). Pestalozzi (1951) has rightly remarked that “education is a natural, harmonious and progressive development of man’s innate power”. Education is the process of development of the child or the individual.

Education is harmonious development of all the powers of the human being i.e. physical, social, intellectual, aesthetic and spiritual. So, education is the process of bringing out the hidden potentialities of an individual and to unfold the natural abilities and interest before the society. It ensures the acquisition of knowledge and expertise that enable individuals to increase their productivity and improve their quality of life. This increase in productivity also leads towards new sources of earning which enhances the economic growth of a country (Saxton, 2000).

A modern society cannot achieve its aim of economic growth, technical development and cultural advancement without fully harnessing the talents of its citizens. Educationists, thus strive to develop fully the intellectual potential of the students and
make efforts to see that their potentialities are fully recognised and channelized for the benefit of the individual and that of the society. It proceeds from birth to death and schools exert greater influence in educating the child and promoting academic achievement. Therefore, the level of academic achievement of a child at any stage depends on the extent to which its natural potentialities have developed. (Lamare, 2010).

Considering the importance of education in every aspect of human, societal and natural life, the government of India paid special attention to provide education to all citizens. Several commissions and committees have been setup to analyse the progress and to give recommendations for further improvement in access, retention and quality at various stages. After Independence the first action of a great significance taken by the Government of India in the field of education was the appointment of the University Education Commission (1948-49). The aim of the commission was to report on Indian university education and suggest improvements and extensions that may be desirable to suit present and future requirements of the country. The Union Government, appointed the Secondary Education Commission in 1952. The Commission thoroughly examined the then prevailing secondary education system and gave a number of suggestions for reforms. Considering the key role of science education, the commission asserted that “with a view to accelerating the growth of the national economy, science education and research should receive high priority. Science and mathematics should be an integral part of general education till the end of the school stage”.

Later Education Commission (1964-66) advised the government on the national pattern of education and on the general principles and policies for the development of education at all stages and aspects which resulted in the form of National Policy on Education (NPE, 1968). It could not be implemented because education was on the State list and States were not serious about implementing it. With 42nd constitutional amendment in 1976, education was put on the concurrent list. Thus, centre would provide good and effective leadership and would ensure that States implement its decision in right earnest. The National Policy on Education (1986)-Programme of Action (POA) 1986 was approved by the government of India. Finally, it was revised in 1992, on the basis of

The new policy called for "special emphasis on the removal of disparities and to equalise educational opportunity," especially for Indian women, Scheduled Tribes (ST) and the Scheduled Caste (SC) communities (NPE, 1986, pp. 6-8). Important policy recommendations for development of tribal education were: i) priority will be accorded to opening primary schools in tribal areas; ii) there is a need to develop curricula and devise instructional material in tribal language at the initial stages with arrangements for switch over to regional languages; iii) promising ST youths will be encouraged to take up teaching profession in tribal areas; iv) ashram schools/residential schools will be established on a large scale in tribal areas; and v) incentive schemes will be formulated for the tribals, keeping in view their special needs and lifestyle.

An important landmark in the field of Indian education was passing the ‘right to education’ bill and enacting the Article-21-A, which ensures that state shall provide free and compulsory education to the children in 6-14 year age group. In the words of National Policy of education (NPE, 1986), “In our national perception, education is essentially for all. This is fundamental to our all round development, material and spiritual. Education has an acculturating role. It refines sensitivities and perceptions that contribute to national cohesion, a scientific temper and independence of mind and spirit—thus furthering the goals of socialism, secularism and democracy enshrined in our Constitution”. All these initiatives clearly indicate that government is sincerely concerned to strengthen the education system in India.

India has the second largest education system in the world after China. The scale of operation involved to ensure quality of education for all in the country is unique and challenging. At the same time, the nature of factors affecting the academic achievement of adolescent students are so diverse that the solution cannot be found in the alteration of any one single factor. Academic achievement has become an yardstick of self worth and success. The outcome of education determines the quality of life, progress and status of people living anywhere in the world (Devi & Mayuri, 2003).
Academic achievement is the core of the entire educational growth. It is regarded as an important goal of education. Academic achievement is the prime and perennial responsibility of a school or any other educational institution established by the society to promote whole scholastic growth and development of a child. The prediction of academic achievement has assumed enormous importance to its practical view. This has drawn the attention of the researchers who have attempted to unravel the complex determinants of academic achievement. Hence, the entire effort of education is towards improving the academic performance of the pupils. The problem of predicting high school success has probably received more public attention than any other single problem in education.

1.1) Concept of Academic Achievement

Academic achievement is the extent to which a learner is profiting from instructions in a given area of learning, hence achievement is reflected by the extent to which skills and knowledge has been acquired by the person from the training imparted to him (Crow and Crow, 1969). Academic achievement is the degree of proficiency or progress made by pupils in the mastery of school subjects (Stagner, 1962). Academic achievement as stated by Good (1959) is, the knowledge attained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher. In the words of Verma and Upadhyay (1981) achievement is the attainment or accomplishment of an individual in some or particular branch of knowledge after a certain period of training. Analysing the definitions mentioned above, we can conclude that academic achievement refers to the level of proficiency attained in academic work or as formally acquired knowledge in school subjects which is determined by the grades, or marks secured by the students in the examination. It reveals the level of educational accomplishment in various subjects taught in educational institution. It also reveals the quantity and quality of learning attained in a subject of study after a period of instruction. Besides being the criterion of promotion to the next class, academic achievement is also an index of future success and determines the
pattern of one’s living. In view of this, the factors which play an important role in determining an individual’s academic achievement need to be studied.

Singh (1976) pointed out that, academic achievement is a very complex variable, a resultant of diverse factors of different kinds intellectual and non-intellectual, acting and interacting in a variety of ways. Academic performance is a complex behaviour. Researches have consistently shown that academic achievement is not an outcome of any single factor; rather it is the result of the interplay of a large number of factors (Gupta, 1993).

A large number of researches have been conducted on adolescents taken into consideration a number of factors like socio-economic status, emotional intelligence, scientific temper, adjustment, self-concept, scientific attitude, creativity, intelligence, vocational aspiration, study habits, etc. all these factors are directly and indirectly related to the academic achievement of the adolescents. For example (Chadha, Chandna and Sunanda, 1990; Smith and Dobbs, 1991; Begum and Phukan, 2005; Naglieri and Bornstein, 2003; Habibollah, et al, 2009; Steinmayr, et al., 2010; Simon and Eachus, 2000; Entwistle, 1968; Rindermann and Neubauer, 2001; Sewell and Hauser, 1980; Teachman, 1987; Benbow and Arjmnd, 1990; Purang and Sharma, 2000; Brooks-Gunn and Duncan, 1997; Patrikakou, 1997; Smith, Brooks-Gunn and Klebanov, 1997; Jennifer, 2006; Ezeameyi, 2002; Boahene, 2006; Young, 1998; Roscigno and Crowley, 2001; Haseen, 1999; Sunetha, et al., 2001; Alam, 2001; Vyas, 2002; Adepoju, 2002; Gakhar, et al., 2003; Kasinath, 2003; Prakash, 2003; Jayaswal, et al, 2003; Gakhar et al., 2004; Domenich et al., 2007; Subramanyam et al., 2008; Sridevi and Parveen, 2008; Lal, 2014; Singh, 1984; Verma, et al., 1981.

Most of the researches cited above mentioned a number of factors associated with adolescents’ academic achievement like-socio-economic status, adjustment, parental support, gender, personality, individual attributes, social isolation, self concept, motivation, intelligence, location, dominance in rural area, learning environment, cognitive abilities, self-control, interpersonal relations, parent’s educational level, school management, parent child interaction, parental beliefs, anxiety level, creativity, problem
solving ability, mental health, school adjustment, temperament, learning environment, scientific attitude, memory, thinking styles, emotional intelligence, optimistic and pessimistic attitude, level of aspiration, cognitive style. In addition to it cross cultural and several comparative studies on bases of working and non-working, native and non-native, urban and rural, tribal and non-tribal, immigrant and non-immigrant, male and female, racial, ethnic and caste groups were also conducted by researchers keeping in view the complex relationship of education with psychology and sociology.

Among the various psychological variables, intelligence is perceived as vital predictor of academic achievement. Numerous research studies have demonstrated how intelligence is positively related to academic achievement (Chadha and Chandna, 1990; Smith, Smith & Dobbs, 1991; Venugopal, 1994). Recent research findings of Naglieri and Bornstein (2003); Begum and Phukan (2005); Vaidharani and Chamundeswari (2006); Steinmayr et al., (2010) also indicated strong relationship between intelligence and academic achievement. Barry & Plecha (1999), Simon & Eachus (2000) supported that self-control was observed more in high achiever students than the low achiever students. Personality has been linked to academic achievement of adolescents (Kumar 1989; Rau & Durand, 2000; Rindermann & Neubauer, 2001; Diseth, 2002; Gakhar et al., 2003). According to Rau & Durand (2000) personality and academic achievement are closely related to each other. Diseth (2002) investigated the relationship between personality and academic achievement and his results showed significant correlations between the personality factors of openness and neuroticism but negatively correlated with agreeableness.

Studies on the effect of culture on students’ attitudes and academic achievement show that cultural learning environment influences student’s attitudes and achievement (Bao-Shaw and Crawley, 1987; Fisher and Waldrip, 1997). Boys attending urban schools had better attitudes towards science than those attending rural schools. Additionally, it is reported that urban adolescents are significantly higher on academic performance than rural adolescents (Young, 1998; Roscigno & Crowley, 2001; Joshi & Srivastava, 2009). Adepoju (2002) studied the motivational variables and academic performance of
urban and rural secondary school students and found that there was an enhanced
relationship of each of the motivational variables in respect to academic performance
with the provision of learning materials as the most predictor variable, followed by
employment of private teachers and conducive school environment respectively. The
locality (rural/urban) also affect the reasoning ability of the students significantly
(Gakhar et al., 2004). The reason for low educational achievement among the
disadvantaged adolescents may be due to less cognitive abilities (Coleman, 1966).
Ezeameyi (2002) reported the dominance of males over females in academic
achievement.

In another study, Kasinath (2003) studied interactive effect of mental health,
school adjustment and socio-economic status on academic achievement and found that
mental health had significant determinant effect on achievement in school subjects;
students having better social and emotional adjustment attain good academic scores.
Prakash (2003) explored temperament and memory as determinants of Mathematics
achievement and found that ascendancy, vigorous and persistent temperaments were
significantly and positively correlated with Mathematics achievement in girls;
ascendance, accepting, vigorous, cooperative and tough minded temperaments were
significantly and positively correlated with Mathematics achievement among boys.
Gender differences were also reported by Chadha & Kaur (2008); Boahene (2006);
attitude had significant relationship with academic achievement among male and female
adolescents of science and arts stream. Boahene (2006) found that academic
achievement favour male dominance over the feminine gender. Girls were among top
ranking students; girls were better in interaction and concentration while boys were better
than girls in language, reasoning and drilling dimension, gender difference study

Science and technology have been an integral part of the Indian tradition since time
immemorial. India was always in the forefront as far as contemporary scientific
knowledge and its understanding were concerned. It was however, only after
independence and support of India’s first Prime Minister Pt. Jawahar Lal Nehru, that Science and technology were developed in a conscious way as a major force for social and economic change. Even the constitution of India, in its Fundamental Duties of Citizens, the Article 51-A clearly states that “It shall be the duty of every citizen of India to develop scientific temper, humanism and the spirit of enquiry and reform”. It seeks that science must permeate the whole of our national life and all areas of endeavour. It again recently emphasized in Science and Technology Policy (STP-2003) that “Every effort will be made to convey the young for the excitement in scientific and technological advances and to instil the scientific temper in the population at large” (GOI-2003). National Science Day is being celebrated by Government of India every year to widely spread a message about the significance of scientific applications in the daily life of the people. The theme of the year 2014 was “Fostering Scientific Temper”.

India has distinctly accepted the development of scientific temper as one of the objectives of education. But there are limited research studies on it. An overview of literature on scientific temper reveals that researchers have used scientific temper and scientific attitude interchangeably. The same qualities are quoted for a person who has scientific temper. It looks like there is no difference between scientific attitude and scientific temper (Tulasi, 2004). These two terms scientific attitude and scientific temper differ in their generality and the difference is very subtle (Gupta, 2007). It is clear from the factors of scientific attitude that scientific temper and scientific outlook are the concepts having a very close relationship with scientific attitude (Deshpande, 2008). Researchers who have shown interest in scientific temper are Sharma (1990); Dubey (1992); Pradhan (1996); Singh, (1990); Showket and Nadeem (2008); Odom, A. L., Marszalek, J. M., Stoddard, E. R., and Wrobel, J. M. (2011); Qadir (2011); Aezum & Wani (2013); Maqbool & Akbar (2013); Mudasir & Yatu (2013); Mahanti, Subodh (2013); Bhat & Netragaonkar (2014). In another study on scientific temper, significant difference was reported between male science teachers and male non-science teachers; no significant difference appeared between female science teachers as well as non-science teachers as well as science students and non-science students (Dubey, 1992). Region and location seems also affecting the scientific temper of students. In a comparative study on
Indian and Nepali students it was revealed that Nepali students scored higher than Indian students; no gender difference were found on scientific temper. Further, it was revealed that students attending urban schools had much higher level of scientific temper than students attending rural school (Pradhan, 1996). Odom, Jacob, Elizabeth, and Jerzy (2011) concluded on a sample of 294 seventh-grade students enrolled in middle school that, there is positive relationship between scientific attitude and achievement. Similarly Qadir (2011) in a comparative study among rural and urban adolescent girls of Kashmir on scientific temper measure concluded that the two groups of students do not differ significantly on scientific temper scale but, urban girls were found to have higher academic achievement than their counter parts. Another comparative study was carried out to find out the scientific temper and academic achievement of Kashmiri and Pakhtoon students, it was revealed that there was no significant difference between Kashmiri and Pakhtoon students on the scientific temper variable. However, Kashmiri students showed better academic achievement than Pakhtoon students (Mudasir & Yatu, 2013). Gender difference was reported by Aezum & Wani (2013) in which boys scored higher on scientific temper scale than girls. Additionally, urban students also achieved higher score on scientific temper measure than rural students’. In a comparative study on science and social science adolescents, it was found that the two groups showed significant difference on curiosity and objectivity aspects of scientific temper scale, and academic achievement (Maqbool & Akbar, 2013). First and non-first generation students were compared on scientific temper and academic achievement. From a sample of 800 students, it was concluded that non-first generation learners were found to have better scientific temper and academic achievement than their counterparts (Bhat & Netragaonkar, 2014).

An area of recent interest in scholastic success regards the role that emotional intelligence construct plays. Petrides, Frederickson, and Furnham (2004); Kolachina, (2014) showed how emotional intelligence influences the academic performance. Similarly, Sridevi and Parveen (2008) stated that there was a positive relationship between emotional intelligence and achievement of higher secondary students. Further evidence of emotional intelligence and its positive relationship with academic success can be found in (Tapia, 1998; Catalano et al. 2004; Parker, Creque, et al., 2004; Parker,
Summerfeldt, et al., 2004; Austin et al., 2005; Parker et al., 2004; Ogundokum, 2007). In their studies they concluded that various elements of emotional intelligence predicted academic success. They found that highly successful students scored higher than the unsuccessful group on three subsets of emotional intelligence (interpersonal ability, stress management and adaptability). A study conducted by Rode et al. (2007) predicted that emotional intelligence was related to academic performance for two reasons. First, academic performance involves a great deal of ambiguity. Second, majority of academic work is self-directed, requiring high levels of self-management. Therefore, individuals with high emotional intelligence would perform better academically. In addition, children with high or moderate trait EI scores achieved significantly better grades than the group with lower scores. Pekrun, Elliot, and Maier (2009) showed that goals and emotions were both important predictors of examination performance among 218 German and American undergraduate psychology students.

Looking at the relationship between trait emotional intelligence, academic performance and cognitive ability it was found that emotional intelligence moderated the relationship between academic performance and cognitive ability (Petrides, et al, 2004). By contrast, there were other studies that showed that EI appeared to be unrelated to academic achievement (Newsome, Day, & Catano, 2000; Van der Zee, Thijs, & Schakel, 2002; Raymond, et al, 2003; Yazifi, et al, 2011; Hansenne, & Jessica Legrand, 2012). These finding are also asserted by Van der Zee, Thijs & Schakel (2002) who conducted a study among university undergraduates to examine the relationship between EI and academic attainment and found little evidence of a relationship between the two. Infact, EI was more strongly related to social success than to academic success.

In the literature, the role of socio-economic status in relation to academic success has been traditionally studied (Becker & Tomes 1979; Mueller & Parcel, 1981; White 1982; Gottfried, 1985; Coleman, 1988; Hauser, 1994; Brooks-Gunn & Duncan, 1997; McLoyd, 1998; Bornstein & Bradley, 2003; Sirin, 2005; Tomul, 2009; Gigi, 2014). The role of socio-economic status in understanding scholastic success appears to be solid. Numerous studies have demonstrated how socio-economic status is a predictor of
academic success (Tomul & Kazim, 2009; Caro, 2009). In a study on culturally diverse students, Ford (2013) concluded that students from both high and low socioeconomic groups have continued to underperform when compared to the dominant group. Caro (2009) examined how the academic achievement gap attributed to socio-economic status changes from childhood to adolescence (ages 7 to 15) and concluded that hierarchical linear models indicated that the gap remains fairly stable from the age of 7 to 11 years and widens at an increasing rate from the age of 11 to the age of 15 years. Parents’ educational level is the main source of influence that determined a child’s academic achievement (Sewell & Hauser, 1980; Teachman, 1987; Benbow & Arjmand, 1990. Child’s intellectual performance is determined by parents’ educational level to a great extent (Patrikakou, 1997). Also, Brooks-Gunn & Duncan (1997) found that mothers educational level were found to be significantly related to children’s performance in school compared to children whose mothers were less educated. It is also indicated that a child’s academic achievement depends on the effects of the social, economic and cultural powers of the environment. According to Purang and Sharma (2000), society and parents lay strong emphasis on educational accomplishment. The result of the study of Zook and Repinski (2004) revealed that parents’ academic involvement is associated with academic performance of their children.

It appears that the familial environment where the child grows up has an important effect on academic achievement. Parental attitudes and practices provide the foundation for children’s development, especially, school performance (Taylor, et al. 2004). Smith, Brooks-Gunn & Klebanov (1995) reported that family income contributed to children’s academic achievement. According to research findings, disadvantageous situations such as low income and low education level in the family, negative attitudes of the family, and negative relations with the neighbours have a negative effect on students’ academic achievement. It is further asserted that a significant and positive relationship exists between socio-economic status and academic achievement of the students (Alam, 2001; Jennifer, 2006; Franky & Chamundeswari, (2014). Jayaswal, et al. (2003) examined the role of parental support and academic achievement of tribal school students and found that parents of high achievers were more supportive, have high aspiration and liberal but
the parents of low achievers were not strongly ambitious of children’s upward mobility; the high achievers’ parents believed in counselling for correct behaviour whereas the parents of low achievers were authoritarian and believed in physical punishment. However, there are studies which show no significant correlation at all (e.g., Seyfried, 1998; Ripple & Luthar, 2000; Henrietta & Odozi, 2014).

Though the role of various cognitive and non-cognitive factors in promoting or reducing academic achievement has been explored in academic achievement literature, but still more studies are needed in this area on account of its potentially crucial effect on academic achievement. A complete and comprehensive picture of academic achievement still seems to eluding the researchers, especially of disadvantaged students. The search therefore continues and educational researchers all over the world seek the solutions to bridge the academic gap between advantaged and disadvantaged, like Scheduled Tribe students. An important task of education is to lessen this academic gap between the privileged and unprivileged population, that has been the prime cause of social tension across the country. However, there has been hardly any serious attempt to study the scientific temper, emotional intelligence, socio-economic status and academic achievement of tribal and non tribal adolescents of Kashmir. Thus, the present study is a humble attempt to bridge the gap in this research area.

1.2) Scheduled Tribes in India

The Constitution of India, in Article 366, has defined the Scheduled Tribes as such of those tribes or tribal communities which have been so declared by the Constitution Order under Article 342 for the purpose of the Constitution. There are 622 tribal groups who have been identified as Scheduled Tribes. They have been previously described as ‘aborigines’, ‘aboriginals’, ‘primitives’, ‘adivasis’, ‘vana jatis’ etc. Special provisions have been made in Articles 46, 275, 330, 332, 335, 338, 340, etc. to safeguard the interests of scheduled tribes and to protect them from social injustice and exploitation.

India, with a population of 104.8 million (2011 census), has the single largest tribal population in the world, constituting 8.6% of the total population of the country. There are 645 individual tribal groups with diverse socio cultural life, who are at various levels
of social and economic development, with different degrees of exposure to modernity and social change. One of the distinguishing features is that majority of them live in scattered and small habitations located in remote and inaccessible settlements in hilly and forest areas of the country. Most of the tribal concentrated areas lack basic facilities such as roads, transport, communications, electricity, medical facilities etc. The literacy rate among tribal is low, but also varies widely among different groups and regions. More importantly, a considerable portion of tribal children continue to be outside the school system (Sujatha, 2000).

Among the major states in India, Madhya Pradesh has the highest percentage (14.7 percent) of ST population. Other states where the proportion of ST population is higher are Maharashtra (10.1), Orissa (9.2 percent), Rajasthan (8.9 percent) and Gujarat (8.6 percent) Jammu and Kashmir (11.9 per cent). In the north eastern states of Arunachal Pradesh, Meghalaya, Mizoram, and Nagaland, 90 percent of the population is tribal. However, in the remaining northeast states of Assam, Manipur, Sikkim, and Tripura, tribal population varies between 20 to 30 percent.

1.3) Special schemes for educational development of Scheduled Tribes

The Ministry of Tribal Affairs is implementing Special Schemes for the educational development of Scheduled Tribes in the country. Details of the schemes of the Ministry are as below:

- Post matric Scholarship is provided to tribal students so that they can continue their education after matriculation.

- Up gradation of merit of Scheduled Tribe Students. Under the scheme special coaching is provided to tribal students for elevating their merit.

- Hostels for Girls. Center provides financial aid to State and union territories for construction of hostels for girls and for improvement of the existing hostels.

- Construction of Boys Hostel for Scheduled Tribes.

- Rajiv Gandhi National Fellowship Scheme (RGNF). Under this Scheme tribal students are provided fellowships for pursing research studies in higher education.
• Top Class Education scheme for Tribal students. The aim of the schemes is to encourage worthy and meritorious Tribal students for continuing higher education.

• Construction of Ashram School. The objective of the scheme is to provide living accommodation and conducive atmosphere for education in tribal sub-plan area.

• National Overseas Scholarship. Under the scheme scholarship is provided to tribal students who want pursue higher education outside country.

• Free coaching is provided to tribal students for competing in various examination at State and Centre levels.

• Strengthening education of tribal girls. It is a special scheme for tribal girls in low literacy districts. The aim of the scheme is to increase enrolment of tribal girls so that they can come at par with general female population. Another aim of the scheme is that tribal girls should complete their elementary education.

1.4) Scheduled Tribes of Jammu and Kashmir

The State of Jammu and Kashmir is one of the largest States of the Indian Union. It lies between 32°15' and 37°05' North latitude and 72°35' and 83°20' East Longitude. The total area of the State is at about 2,22,236 sq. km out of which 78,114 sq. km is under the control of Pakistan and 37,555 sq.km. under China. In addition to this, 5,180 sq.km. of Jammu and Kashmir were handed over by Pakistan to China. This leaves the State with an area of 1,01,387 sq.km. the Indian State of Jammu and Kashmir and Ladakh. As per census 2011, total population of the State is 1,25,48,926 persons with its density being 124 and sex ratio 883. Further break-up of population by sex shows that 66,65,561 are male and 58,83,365 are female.

The constitution of Jammu and Kashmir recognizes twelve tribal groups as Scheduled Tribes of the state. According to the census 2001 tribal population of Jammu and Kashmir is 1,105,979 constitutes 10.9 per cent of the total population of Jammu and Kashmir and 1.3 per cent of the tribal population of India.

Majority of the tribals of the Jammu and Kashmir are inhabited in rural areas of the state. Among the districts Kargil, Leh, Punch, and Rajauri have high concentration of
tribals. Out of twelve tribals of J&K Gujjar has a highest population of 763,806 followed by Bot (96,698), Bakarwal (60,724) and Brokpa (51,957) whereas Balti, Purigpa and Gaddi have population ranging from 38,188 down to 35,765. Remaining five tribes, Sippi, Changpa, Mon, Garra and Beda constitute 1.9 per cent. Beda 128 among all the tribals. Gujjar are inhabited in Punch and Rajauri districts, followed by Anantnag, Udhampur and Doda districts. Bot, Bakarwal and Brokpa tribals are inhabited in Leh, Anantnag and Baramula districts respectively. Balti and Purigpa live in Kargil district, Gaddi is in Kathua district
1.5) Literacy Rate of Jammu and Kashmir

Literacy Rate is defined as percentage of literates among the population aged seven years and above. Educational progress of a State is gauged through its literacy rate. The overall literacy of J&K has increased by about 13.67 per cent, between 2001 and 2011 from 55.50 per cent to 68.74 per cent with male literacy at 78.26 per cent and female 58.01 per cent. Female literacy has increased by 15 per cent. The literacy among the Scheduled Caste is 59.0 per cent. District-wise analysis of literacy rate indicate that as per 2011 census, the overall literacy rate is highest in Jammu district at 83.98 per cent and lowest in Ramban district at 56.90 per cent. Both male and female literary rate 89.77 and 77.41 is highest in Jammu respectively.

1.6) Literacy Rate of Scheduled Tribes in Jammu and Kashmir

As per census 2011 the literacy rate of tribals (see table 1) is 50.6 percent which is far lower than the average literacy 59.0 per cent of tribal at national level. The literacy rate of male of tribals of J&K (60.5 percent) is much lower than the tribals at national level (68.5 percent). Also the literacy rate of female tribals (39.7 percent) of J&K is low in comparison to female tribals at national level (49.4 percent). Among the larger tribes of J & K, Balti, Bot, Purigpa and Brokpa have higher literacy rate whereas Gujjar, Gaddi and Bakarwal have a lower literacy rate than national average. Female literacy among these tribes shows the same trend.

Table No 1.1
Literacy Rate of Scheduled Tribes

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<td></td>
<td>National Level</td>
<td>State Level</td>
<td>Balti</td>
<td>Bot</td>
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<tr>
<td>Persons</td>
<td>59.0</td>
<td>50.6</td>
<td>62.1</td>
<td>61.3</td>
</tr>
<tr>
<td>Males</td>
<td>68.5</td>
<td>60.5</td>
<td>77.5</td>
<td>71.6</td>
</tr>
<tr>
<td>Females</td>
<td>49.4</td>
<td>39.7</td>
<td>45.4</td>
<td>50.3</td>
</tr>
</tbody>
</table>

1.7) Educational Attainment of Scheduled Tribes of J&K

Table No 1.2

Educational Attainment of Scheduled Tribes in Jammu and Kashmir

<table>
<thead>
<tr>
<th>Names of STs</th>
<th>Literates without educational level</th>
<th>Below Primary</th>
<th>Educational Levels attained by Scheduled Tribes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Primary</td>
<td>Middle</td>
</tr>
<tr>
<td>All STs</td>
<td>8.4</td>
<td>26.5</td>
<td>26.2</td>
</tr>
<tr>
<td>Gujjar</td>
<td>9.9</td>
<td>28.6</td>
<td>27.6</td>
</tr>
<tr>
<td>Bot</td>
<td>6.6</td>
<td>19.7</td>
<td>25</td>
</tr>
<tr>
<td>Bakarwal</td>
<td>18.3</td>
<td>30</td>
<td>26</td>
</tr>
<tr>
<td>Brokpa</td>
<td>3.8</td>
<td>24.6</td>
<td>22.5</td>
</tr>
<tr>
<td>Balti</td>
<td>3.1</td>
<td>23.2</td>
<td>22.8</td>
</tr>
<tr>
<td>Purigpa</td>
<td>3.2</td>
<td>25.2</td>
<td>22.7</td>
</tr>
<tr>
<td>Gaddi</td>
<td>6.6</td>
<td>31.4</td>
<td>28.4</td>
</tr>
</tbody>
</table>

Source: Census of India 2001.

It is clear from Table 2 that among the literate tribals of the State, 34.9 per cent tribal literates have either attained education below primary level or without any educational level. The primary level tribal literates comprise of 26.2 per cent and the middle level literates make up 22.1 per cent. The tribals who have attained education up to matric/secondary/higher secondary consist of 14.7 per cent while 2 per cent are graduates and above. Nontechnical and technical diploma holders form meagre 0.1 per cent. At the individual level of tribals, Bot, Balti, Purigpa have more than 22 per cent literates as matriculates, implying that every fourth literate of these tribes are matriculates. Bakarwals have the lowest 7.8 per cent of secondary level literates. It is also clear from the Table 2 that the percentage of literates after middle school drops down to almost half in the secondary level of schooling and declines acutely onwards.
Table No 1.3

School going Children in the Age Group of 5-14 Years among Scheduled Tribes of Jammu and Kashmir.

<table>
<thead>
<tr>
<th>Age group</th>
<th>All STs</th>
<th>Bot</th>
<th>Balti</th>
<th>Purigpa</th>
<th>Brokpa</th>
<th>Gaddi</th>
<th>Gujjar</th>
<th>Bakarwal</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-14 yrs.</td>
<td>44</td>
<td>78.2</td>
<td>74.7</td>
<td>74.2</td>
<td>60.2</td>
<td>44.9</td>
<td>38.5</td>
<td>25.8</td>
</tr>
</tbody>
</table>

Source: Census of India 2001.

The table 3 shows the school going tribal children in the age group of 5 to 14. It is clear from table 3 that 44 per cent of the total 3.2 lakh tribal population in the age group of 5 to 14 years attend school. Whereas large population, approximately 1.4 lakh (56 per cent), of tribal children in age group of 5 to 14 years do not go to school. Among the major tribals, Purigpa, Balti and Bot have 74 to 78 per cent children in the 5 to 14 age group attending school while Brokpa and Bakarwal have 60.2 and 25.8 per cent children attending school respectively.

Table No.1.4

Rural and Urban Literacy of Scheduled Tribes at National and State Level.

<table>
<thead>
<tr>
<th></th>
<th>National Level</th>
<th>State Level</th>
<th>Balti</th>
<th>Bot</th>
<th>Purigpa</th>
<th>Brokpa</th>
<th>Gaddi</th>
<th>Gujjar</th>
<th>Bakarwal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>45.02</td>
<td>35.74</td>
<td>52.71</td>
<td>57.55</td>
<td>58.54</td>
<td>54.56</td>
<td>36.96</td>
<td>30.80</td>
<td>22.16</td>
</tr>
<tr>
<td>Urban</td>
<td>69.09</td>
<td>70.37</td>
<td>77.07</td>
<td>78.45</td>
<td>77.82</td>
<td>81.46</td>
<td>77.77</td>
<td>59.68</td>
<td>49.45</td>
</tr>
</tbody>
</table>

Source: Census of India 2001.

It can be observed from Table 4 that the literacy rate in rural areas of tribals of Jammu and Kashmir is far less than the tribals at national level. So far as literacy rate of tribals in urban areas is concerned it is almost same at state and national level. Among the rural tribals of J&K Purigpa tops in literacy with 58.5 per cent literacy followed by Bot, Boto with 57.55 per cent and Bakarwal fall at the bottom with literacy rate 22.16 per cent in rural. The Brokpa, Drokpa, Dard and Bot have topped the urban literacy rate.
while Bakarwals remain at the bottom with 49.45 per cent in the urban areas of Jammu and Kashmir.

Table No.1.5
Gross Enrolment Ratio and Dropout Rate for Scheduled Tribes

<table>
<thead>
<tr>
<th>Year</th>
<th>Grass enrolment Ratio (Classes I-VIII)</th>
<th>Dropout Rate (Classes I-VIII)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>State Level</td>
<td>2010-11</td>
<td>82.8</td>
</tr>
<tr>
<td>National Level</td>
<td>2010-11</td>
<td>120.5</td>
</tr>
</tbody>
</table>


Enrolment ratio is defined as the percentage of students who register or enrol at the same time whereas the dropout rate is defined as the percentage of students who drop out of a class in a year. Dropout rate is a very important indicator about enrolment status to capture the flow aspect of educational attainment in any context. The Table 5 depicts the enrolment and dropout of tribals at State and National level at the elementary level. Table 5 shows a disappointing picture of the gross enrolment ratio of tribals of J&K. The gross enrolment ratio of the tribals of Jammu and Kashmir (80.6) is far less than national average gross enrolment ratio (119.7) of tribes. The enrolment of girls as expected in India is less than boys at both state and national level. Table 5 clearly shows that the dropout rate of Scheduled Tribes of Jammu and Kashmir (62.7) is higher than the dropout rate of tribes at national level (55.0). In addition, the table 5 depicts the dropout rate of girls is higher than boys at both state and national level. An increase in the dropout rate of girls also leads to gender disparity in literacy rate. Many empirical studies tried to find the reasons of the high dropout rate of girls. The Main reasons are poverty, lack of interest and indifferent attitude of parents towards girl’s education are the few reasons found (Fayaz, 2010; Virender Koundal, 2012; JK SRC Report 2012).

Perusal of the tables and detailed discussion of the whole scenario in the above sections led us to conclude that Gujjar tribe is the most educationally backward tribe among all the twelve tribes of Jammu and Kashmir. So there is an urgent need of finding
out the root causes of the backwardness and to propose possible measures for the eradication of the same. Therefore conducting empirical researches in this area is of immense significance that may help in recommending the strategies for better educational upliftment of Gujjar tribe. The present investigation is a humble attempt in this direction to find out the factors associated with the educational achievement of tribal adolescents which are supposed to be important contributing factors for educational achievement. A comparison of the said variables with non-tribal sample shall make the study more meaningful and the findings will portray a clearer picture for the educational advancement and status of the tribals of Kashmir.

1.8) Significance of the Study

Academic success ensures overall success as it is directly linked to positive outcomes. Academically successful adolescents have higher self-esteem, have lower levels of depression and anxiety, are socially inclined, and are less likely to abuse other students. Academic success with high educational attainment promotes better employment opportunities with good salaries, develops self confidence and eradicates dependency on social assistance. It also leads to the development of more active and dutiful citizens who are less likely to engage in criminal activities. Moreover academically successful persons are able to keep pace with the rapidly increasing technological innovations in the working environment. On account of such an immense significance, academic achievement remains a top priority for educators. Government, educators, trainers, parents and researchers have long been interested in exploring variables contributing effectively for the academic achievement of adolescent students. It has been stated that academic achievement has become an index of child’s future in highly competitive world. Therefore, it has been becoming more and more pressing for the individual to have good academic achievement. Acquaintance of the fact could not be refuted that academic achievement is affected by a plethora of variables. An exhaustive review of the related literature (summarised and presented in previous pages) have revealed that a multitude of variables belonging to both cognitive and non-cognitive
domains may have an impact on the academic achievement of adolescents.

Scheduled Tribes are a minority; they constitute about 8.6% of the total population in India (Census of India, 2011). The Scheduled Tribe population represents one of the most economically impoverished and marginalized groups in India. The Scheduled Tribes have, for the most part, been socially distanced and living outside the mainstream society. The areas inhabited by the tribal population constitute a significant part of the underdeveloped areas of the country. Currently, the tribals lag behind not only the general population but also the Scheduled Caste population in literacy and educational attainment. The literacy rate of Scheduled Tribes of Jammu and Kashmir is 50.6%, which is much lower than the national average of 59.0% aggregated for all Scheduled Tribes, which is also, lagging behind the total literacy rate of Indian population, i.e. 74.04% (Census of India 2011). There are various provisions in the Constitution of India like article 46, “The state shall promote, with special care, the educational and economic interests of the weaker sections of the people, and, in particular of the scheduled castes and the scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.” Article 330, 332 and 334 of the Constitution provide for the reservation of seats for scheduled tribes in the Lok Sabha and Rajya Sabha. Article 335 of the Constitution says, “The claims of the numbers of the scheduled castes and scheduled tribes shall be taken into consideration in making of appointments to services and posts in connection with the affairs of the union or of a state”. Article 15 supports prohibition of discrimination on grounds of religion, race, caste, sex or place of birth; article 21(A) ensures right to education as a fundamental right. Article 29 (2) tried to remove educational inequality on the basis of religion and language which says, “No citizen shall be denied admission into any educational institution maintained by the state on the grounds only of religion, race, sex, language or any of them”. The UPA Government had set six basic principles for governance. One of them was “To provide full equality of opportunity, particularly in education and employment for scheduled castes, scheduled tribes, OBC and religious minorities”. Inspite of various provisions, still tribal people remained backward in all respects especially in education.
In the present scenario, the investigator feels an urge to statistically identify the significant predictors of academic achievement of tribal and non-tribal adolescents of Kashmir.

1.9) Definitions of the key terms:

1.9.1) Scientific Temper

Scientific temper is a way of life in which an individual uses a scientific method, which may include questioning, observing physical reality, testing, hypothesizing, analysing, and communicating. Scientific temper describes an attitude which involves the application of logic. Discussion, argument and analysis are vital parts of scientific temper. Science is ‘reasoned knowledge’ about facts, things, persons, natural phenomena and social behaviour. Temper is a particular state of mind especially with respect to disposition. Therefore, scientific temper represents a spirit of enquiry based on logical reasoning. The ability to think objectively, logically and analytically leads to the development of scientific temper. It is by nurturing scientific temper that one can be liberated from dogmatism, irrational beliefs and superstition. Dhar (2009) all the steps of the scientific method are involved in the process of solving this commonly encountered problem. We consider such a person, who imbibes the essence of scientific method in his outlook, and uses it in his everyday life, as possessing “Scientific Temper”. She may not necessarily be a scientist, not even a science student, and yet have scientific temper. The scientific temper or scientific attitude is characterized by following traits:

a. Healthy scepticism

b. Universalism

c. Freedom from prejudice or bias

d. Objectivity

Since the acceptance of philosophical and sociological perspectives of science, scientific attitude gained significance. But a wider perspective was given to this term as ‘scientific temper’ when understanding of science and scientific thinking became our integral part of
formal as well as non-formal system of education. These two terms scientific attitude and scientific temper differ in their generality and the difference is very subtle (Gupta, 2007).

For the present study scientific temper has been operationally defined as the scores obtained by the tribal and non-tribal adolescents of Kashmir on the Showket and Nadeem Scientific Temper Scale.

1.9.2) **Emotional Intelligence (E.I.)**

A brief account of definitions proposed by different authors on Emotional intelligence is given below:

Mayer and Salovey (1997) defined Emotional intelligence “the ability to perceive accurately, appraise, and express emotion; the ability to access and / or generate feelings when they facilitate though; the ability to understand emotion and emotional knowledge; and the ability to regulate emotion to promote emotional and intellectual growth”. Goleman (1998) defines Emotional Intelligence as the “the capacity for recognizing our own feelings and those of others, for motivating ourselves and for managing emotions well in ourselves and in our relationships”. Cooper (1996) defines emotional intelligence as an ability to sense, understand and effectively apply the power and acumen of emotions as the source of human energy, information, trust, creativity and influence.

Bar-On (1997) proposed that emotional intelligence reflects one’s ability to deal with daily environment challenges and helps predict one’s success in life, including professional and personal pursuits. Freedman (1998) defined emotional intelligence as the way of recognizing, understanding and choosing how we think, feel and act. It shapes our interactions with others and our understanding of ourselves. It defines how and what we learn, it allows setting priorities, it determines the majority of our daily actions. Singh (2003) defines emotional intelligence as an ability of an individual to appropriately and successfully respond to a vast variety of emotional stimuli drawn from the inner self and immediate environment.

Singh (2003) proposed three dimensions of Emotional Intelligence. He defines EI as “the ability of an individual to appropriately and successfully respond to a vast variety
of emotional stimuli being elicited from the inner self and immediate environment. Emotional intelligence constitutes three psychological dimensions – emotional competency, emotional maturity and emotional sensitivity – which motivate an individual to recognize truthfully, interpret honestly and handle tactfully the dynamics of human behaviour”.

For the present study Emotional Intelligence will be operationally defined as the scores obtained by the tribal and non-tribal adolescents of Kashmir on the Mangal and Mangal Emotional Inventory.

**1.9.3) Socio-economic status (SES)**

Socio-economic status is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education, and occupation. When analyzing a family's SES, the household income, earners' education, and occupation are examined, as well as combined income, versus with an individual, when their own attributes are assessed. National Center for Educational Statistics (2008)

Socioeconomic status is commonly conceptualized as the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation. Examinations of socioeconomic status often reveal inequities in access to resources, plus issues related to privilege, power and control (American Psychological Association, 2014).

Kuppuswamy (1962) has showed that the three important variables contribute to the socio-economic status of the people. These are education, occupation and income. Thus according to him, socio-economic status of people is governed by education, occupation and income of the family. Page, Thomas and Marshall (1978) in the International dictionary of education has defined socio-economic status as persons position in any group, society or culture as determined by education, occupation, wealth and social class. Good (1973) in the dictionary of education has defined it as the
background, environment or level indicative of both the social and economic status of an individual or a group.

It is an index of social status that includes a person’s education, occupation and income as measure of social status (Hudges, 1984). According to Slavin (1997), socio-economic status is an ascribed characteristic of groups and viewed as a measure of prestige within a social group frequently based on schooling attainment, income and occupation. Valcia and Suzuki (2001) have mentioned the three top most categories that can be used to measure socio-economic status. These are education of the parents, occupation of the parents and income of the family.

For the present study Socio-Economic Status is operationally defined as the scores obtained by the tribal and non-tribal adolescents of Kashmir on the Divya Singh and Deepa Vinay Socio-Economic Status Scale (Rural).

1.9.4) Adolescence

Adolescence is derived from the Latin word meaning “to grow to maturity” is transitional period extending from the time the individual becomes sexually mature until he reaches legal maturity. Adolescence is divided into two periods: early and late adolescence. The dividing line is at 17 years, when the average adolescent becomes a senior in high school and is recognised by the social group as a near adult. Transition into adulthood is influenced by such factors as speed and length of the transition; discontinuities in training, degree of dependence on parents; ambiguous status in the group; conflicting demands from parents, teachers, and peers; the adolescent’s unrealistic aspirations; and his motivation to make the transition. Adolescence is the most important period of human life. It may be conceived as a product of the interaction of biological and cultural factors upon the individual as he moves from childhood into adulthood. Usually it is thought of as that period of life in which maturity is being attained.

Good (1973) in the dictionary of education defines it as, “a period of human development occurring between puberty and maturity and extending roughly 13 or 14 years of age into the early 20s.” According to Jersild (1978), adolescence is the span of
years during which boys and girls moves from childhood to adulthood, mentally, emotionally, socially and physically. Bankan (1971), adolescence is as much as social construction as an attributes of the individual. Some cultures and subcultures recognise a transitional period of a decade or more between childhood and adulthood while other cultures view the transition as occurring in the course of a brief initiation write which may last only a few days or hours. The social construction of a lengthy adolescence has been traced to the creation of a juvenile system, child labour laws, and compulsory education laws during the nineteenth century emergence of an urban/industrial culture.

Encyclopaedia Britannica (2009) defined adolescence as transitional phase of growth and development between childhood and adulthood. In many societies adolescence is narrowly equated with puberty and the cycle of physical changes culminating in reproductive maturity.

The most common damaging effects of the transition are instability, preoccupying with problems (both personal and those characteristic of the adolescent period), problem behaviour, and unhappiness. Unhappiness in adolescence, which is far from universal and more typical is far from universal and more typical of boys than girls, leads to behaviour which perpetuates unhappiness. Such behaviour often becomes habitual, predisposing the adolescent to make poor personal and social adjustments and often leading to personality disorders. Success in making the transition into adulthood is facilitated by love and understanding from parents and other significant people in the adolescent’s life, by limitations on his activities as guidelines for socially approved behaviour, and by encouragement to learn to be both mature and autonomous.

1.9.5) Academic Achievement

Academic achievement is the success obtained by the individual during the academic session in terms of aggregate marks secured in various subjects in the annual examination conducted by the State Board of School Education. In the present study, among the adolescent students, only the students of class IX have been taken into consideration. For the present study the academic achievement shall be measured in
terms of aggregate of marks percentage obtained by the tribal and non-tribal adolescents of Kashmir in their two term examinations.

1.10) **Statement of the Problem:**

In the light of discussion given above, the investigator has taken up the problem to investigate the impact of scientific temper, emotional intelligence, and socio-economic status on academic achievement of adolescents. The problem is formally stated as below;

*"Scientific Temper, Emotional Intelligence, Socio-economic Status and Academic Achievement among Tribal and Non-tribal Adolescents of Kashmir."

1.11) **Objectives:**

1. To compare tribal and non-tribal students on the selected variables, viz. scientific temper, emotional intelligence, socio-economic status and academic achievement.

2. To identify the significant predictors of academic achievement and their extent of predictability for the total sample.

3. To identify the significant predictors of academic achievement and their extent of predictability for the tribal and non-tribal sample

4. To identify the significant predictors of academic achievement and their extent of predictability for the male and female samples.

5. To identify the significant predictors of academic achievement and their extent of predictability for the tribal male sample.

6. To identify the significant predictors of academic achievement and their extent of predictability for the tribal female sample.

7. To identify the significant predictors of academic achievement and their extent of predictability for the non-tribal male sample.

8. To identify the significant predictors of academic achievement and their extent of predictability for the non-tribal female sample.
1.12) **Null Hypotheses:**

Corresponding to the objectives of the present research the following hypotheses were framed for empirical verification.

1. There is no significant difference between the scientific temper, emotional intelligence, socio-economic status and academic achievement of tribal and non-tribal adolescents of Kashmir.

2. None of the predictive variables is found to be the significant predictors of academic achievement for the total sample.

3. None of the predictive variables is found to be the significant predictors of academic achievement for tribal and non-tribal samples; and the two groups would show no difference with respect to their predictors or predictability strength.

4. None of the predictive variables is found to be the significant predictors of academic achievement for the male and female samples; and the two groups would show no difference with respect to their predictors or predictability strength.

5. None of the predictive variables is found to be significant predictors of academic achievement for the tribal male and non-tribal male samples; and the two groups would show no difference with respect to their predictors or predictability strength.

6. None of the predictive variables is found to be the significant predictors of academic achievement for the tribal female and non-tribal female samples; and the two groups would show no difference with respect to their predictors or predictability strength.

7. Tribal male and tribal female groups would show no difference with respect to their predictors of academic achievement or predictability strength of the significant predictors.

8. Non-tribal male and non-tribal female groups would show no difference with respect to their predictors of academic achievement or predictability strength of the significant predictors.
1.13) Delimitations of the study:

It is not possible in a single study to cover every aspect of variables associated with the problem under investigation so the study is delimited in several ways:

1. The present study was focussed on adolescents only.

2. Students were selected from only two districts of Kashmir Division only i.e. Anantnag and Kupwara.

3. Students were selected from rural schools affiliated to Jammu and Kashmir State Board of School Education.

4. Out of many independent variables only scientific temper, emotional intelligence, and socio-economic status were taken into account.

5. The study is confined to the ninth standard students (boys and girls) in rural areas, during the academic session 2013-2014.

6. Out of twelve officially recognized tribal groups in Jammu and Kashmir (J&K) only one tribal group (Gujjar) was selected, which is population-wise the major tribal group in the J&K State, for the present study.