

**SOCIO-PSYCHOLOGICAL DISPOSITIONS
OF HIGH AND AVERAGE ACHIEVERS
AT SENIOR SECONDARY LEVEL**

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degree of **MASTER OF PHILOSOPHY***

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DECLARATION

Certified that the dissertation entitled "**Socio-psychological Dispositions of High and Average Achievers at Senior Secondary Level**" submitted by **Madhavi Tripathi** in partial fulfillment of the requirements for the award of the degree of **MASTER OF PHILOSOPHY** of this University. This dissertation has not been submitted for any other degree of this University or any other University, and is her own work.

We recommend that this dissertation may be placed before the examiners for evaluation.

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DEDICATED TO MY MOTHER

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ABSTRACT

The present study was undertaken to explore differences in the socio-psychological dispositions of high and average male/female achievers in science and humanities in a Senior Secondary Class in two schools.

The matching variables were Schools - Public school and Government school, Subject - science and humanities, Achievement - high and average achievers, Gender - male and female. The demographic variables were parent's occupation, parent's education and family income. The measured variables were self-esteem, social comparison, and personality characteristics.

The sample was taken from two schools one Public and one Government. Students' Class X Board Examination scores were taken from the school records. Male and female students in science and humanities were identified on the basis of their percentage above the group mean as high achievers, and those below the mean as average achievers.

The tools used were a checklist prepared by combining some of the personality characteristics included by Muthayya in his Multivariate Personality Inventory and of gifted students by Jaiman (1994); Rosenberg's Self-esteem Test (1965); and Iowa-Netherlands Social Comparison Orientation Measure devised by Gibbons and Bunnk (1999). Information pertaining to demographic variables were collected on a personal information sheet.

The following specific hypothesis were tested:

- (1) There will be significant main effects of school type, subject, achievement and gender on various socio-psychological dispositions (personality characteristic, self-esteem, social comparison, socio-economic status) and performance.

- (2) There will be significant interaction effects of school type, subject, achievement and gender on performance and various socio-psychological dispositions (self-esteem, social comparison, personality characteristics and socio-economic status).
- (3) There will be differential pattern of relationships among performance, personality, self-esteem, social comparison and socio-economic status of high and average achievers, male and female students, students of science and humanities in different types of schools.

The major findings were as follows:

- (1) Students of Public school had higher socio-economic status, were optimistic and had better performance compared to the students of Government school. Students of science were more optimistic, had high need achievement, had better performance and were high on social comparison factor compared to the students of humanities. Students of humanities were high on neurotic tendency than the students of science. The high achievers had better performance and were high on need achievement factor compared to the average achievers. Male and female students did not differ significantly on performance. Male students showed slightly better self-confidence than the female students. The female students were more optimistic compared to the male students.
- (2) Students of humanities in Public school scored higher on social comparison than the students of humanities in Government school. Students of science in Government school had slightly better self-esteem than the students of science in Public school. The high and average achievers in science had better performance than the high and average achievers in humanities. The high achievers in humanities had slightly better socio-economic status than the high achievers in science. The male and female students of science in Public school showed better intellectual functioning than the male and female students of science in Government school. The female students of

humanities in Public school showed better intellectual functioning than the female students of humanities in Government school. The male students of humanities in Government school showed better intellectual functioning than the male students of humanities in Public school.

- (3) Correlational analysis revealed that students of Public school showing high performance had high need achievement whereas such students of Government school had high need achievement as well as high self-confidence. Students of Public school with positive self-esteem had high empathy, high intellectual functioning and were little dogmatic whereas such students of Government school had high need achievement, were dominant and were optimistic. Students of Public school who frequently made social comparison were neurotic and dominant whereas such students of Government school had no significant relationship with any of the personality variables. Students of Public school with high socio-economic status had no significant relation with any of the personality variables whereas such students of Government school had ego ideal and were optimistic and were not introvert.

Students of humanities showing high performance were less pessimistic whereas such science students were optimistic and had high need achievement. Students of humanities with positive self-esteem had high intellectual functioning and were optimistic whereas such science students had high intellectual functioning and were little pessimistic. Students of humanities who frequently made social comparison were little pessimistic whereas such science students were introvert, neurotic and dogmatic. Students of humanities coming from high socio-economic status were little pessimistic and neurotic whereas such students of science had high empathy and were little neurotic.

High achievers showing high performance were optimistic, and dogmatic and had higher need achievement whereas such average achievers had no significant relationship with any of the personality variables. High achievers with positive self-esteem were pessimistic, had high empathy, high intellectual functioning; whereas such average achievers were not pessimistic, had high empathy and were dominant. High achievers who frequently made social comparison were dogmatic whereas such average achievers had no significant relationship with dogmatism or any other personality variables. High achievers from high socio-economic status were less neurotic and were less pessimistic; whereas such average achievers had high empathy, ego ideal, were little neurotic and were low on need achievement.

Male students showing high performance were optimistic and were high on need achievement factor; whereas such female students were little pessimistic and were high on need achievement factor. Male students having positive self-esteem were high on ego ideal and dominance factors and had high intellectual functioning; whereas, such female students had high empathy and self-confidence. Male students high on social comparison orientation were dogmatic whereas such female students were high on intellectual functioning factor, had less ego ideal, were little dogmatic and were optimistic. Male students coming from high socio-economic status had high empathy, had high ego ideal, whereas such female students were little pessimistic and were not neurotic.

From the study it was concluded that students of Public school and students of science had high self-esteem, need achievement, had high self-confidence and frequently made social comparisons than the students of Government school and students of humanities. High achievers had high intellectual functioning, self-esteem, need achievement were more optimistic, had high ego ideal, empathy and made frequent social comparison than the average achievers. But gender difference on socio-psychological disposition was not found to be very prominent. It was found that females were more optimistic

than males. Males had slightly higher self-confidence than females. Academic performance, parent's education, occupation and family income play important role in personality development.

The above findings had the following implications:

Public school students had high self-esteem, need achievement, frequently made social comparison and were optimistic than students of Government school. This may have implications for institutional planning and teaching process in Government school. Focus should be on overall personality development rather than only on curriculum. Students should be engaged in various activities so that their competency in non-academic fields could be improved. The findings showing high social comparison need achievement and optimism among science students than students of humanities may have implications towards curriculum pattern in humanities and other support services. It seems that some professional elements should be injected in humanities stream. The humanities students were more pessimistic as revealed by the study. This can be reduced by reducing abstraction and introducing more objectivity. This can help them in linking their effort with outcome, and achieve close to their real ability level. Career counselling could be given to the students in a regular basis so that they would develop more faith on the ability to achieve in future.

The distinct socio psychological dispositions of high achievers revealed by the present study are high intellectual functioning, self-esteem, need achievement, empathy, better social comparison processes than the average achievers. This implied that average students potentialities were not converted into appropriate action either on account of system deficits or personal inadequacies. Such a finding should have some implications for the teachers, administrators and parents. They should try to find ways in which average achievers could utilise their abilities more meaningfully and get best out of their potential. An understanding of the deficits in academic self concept could be used in designing programmes for their counselling and guidance and enhance the average achievers performance and get best out

of their capabilities. Since average achievers have less academic capability compared to the high achievers, they should be given opportunities to involve themselves in other school activities so that their achievement in non-academic activities would enhance their self-esteem and develop good perception of their future. Some remedial classes for average achievers could be arranged so that they can realise their potentialities in better ways. Co-operative learning situation could be planned in a class room teaching so that average achievers could get opportunities to interact with the high achievers at a personal level so that any feeling of inferiority arising out of comparatively lower academic performance could be overcome.

The study had the following limitations:

The study was done under variety of methodological constraints like limited time and resources which prevented one to look into the depth and width of the socio-psychological correlates. The study was limited to a few socio-psychological variables only. The sample was drawn from two schools in Delhi and hence it is not a true representation of complete population. The study has explored only the qualification, education and income of the parents. The parent-child interactions with respect to home environment and its impact on education should have been explored. A longitudinal study may throw light on the developmental aspect of socio-psychological disposition and its influence on achievement. Details of the types of schools with respect to their climate and its effect on the performance of high and average achievers and personality variables have not been investigated. Another limitation of the present study stemming from its exploratory nature was that the Government schools were different in comparison to Public school in terms of human inputs and conditions of teaching. Government schools did not have similar educational facilities like enriched curriculum, better teaching strategies as obtained in Public school. The results may have differed because of this.

Though the study had limitations yet the following suggestions can be undertaken:

The variation in the type of schools in terms of organisational climate, physical structure, peer group influence or students competence can also be studied to understand their impact on performance. A longitudinal study can be undertaken to understand the variations in levels of aspirations, interest and personality characteristics of high and average achievers, male and female students, students of science and humanities. Further studies could be taken up to study the socio-psychological disposition of high and average achievers in two different settings - rural and urban, at various levels of education - primary, upper primary and secondary so that early intervention could be thought up.

CHAPTER I
INTRODUCTION

CHAPTER - I

INTRODUCTION

High performance in school is seen in general as a positive and socially desirable behaviour of students. This may be a consequence of many cognitive and non-cognitive factors. Sharma and Rao (1983) observed that a number of variables, such as, intelligence, socio-psychological dispositions - self esteem, social comparison processes and socio-economic status of the learner affected the performance of students, but to different degrees. Student showed individual differences in performance as each exhibited certain unique traits and each had his/her own way of looking at things. Extensive research has demonstrated the existence of individual differences in ability and effort among students. This research uses the concepts of intelligence, personality, self-esteem, social comparison processes, gender and socio-economic status to understand the role of these on performance.

(i) Intelligence:

High intelligence (IQ) or ability to perform at high level in school subjects had been found closely related to general intellectual ability. Aptitude to perform well in academic subjects necessitated the use of cognition, memory, convergent production and evaluative thinking abilities. Even for performing arts, high levels of general abilities as well as above average to high levels of creative functioning were important.

Beginning with the psychometric model based definition of intelligence by Terman, Guilford's model of the structure of intellect has been considered as the apex of thought of intellectual functioning. Guilford's (1967) structure of intellect model consisted of five kinds of mental operations - cognition, memory, divergent production, convergent production and evaluation, four kinds of contents (figural, symbolic, semantic and behavioural), and six kinds of information forms or products (units, classes, relations, system, transformation, and implications), making a total of 120 possible intellectual abilities each different from the rest by the unique combination of the mental operation, content, product use. Guilford (1967) found that individual students

could be high performers in many different ways. Of particular importance was the focus given to divergent thinking abilities within the operations, which is also referred to as creativity.

I (ii) Personality:

High performers as persons were found to have some configuration of traits like boisterous, out-going, excitable, alert, bright, having special interests and surplus of energy of doing new things. These traits or characteristics formed the basis of personality, which distinguished high performers from their average counterparts. Allport (1937) recognised that traits could not be directly observed or measured but must be inferred from behaviour. He was interested in determining the number of traits a person might possess and used a variety of methods. Allport (1961), distinguished among several categories of traits and arranged them hierarchically. At the top of the hierarchy, he placed cardinal traits. The master motives or passion pervaded every aspect of life. Few people had cardinal traits, but those who had were obsessed by them. In contrast, every one had central traits like, neatness (or its opposite), thriftiness, industriousness, trustworthiness, competitiveness and the like. These represented a relatively small number of dispositions that had a broad influence on an individual's behaviour. Cattell (1950) distinguished between surface and source traits. Surface traits were those traits that, to a casual observer, seemed to "go together". He recognised a total of 46 surface traits Cattell, Eber, Tatsuoka (1970). Table (a) illustrates one surface trait of sociability together with some of its component dimensions.

Table (a)

Surface Trait

Sociability, sentimentalism	vs	Independence, hostility, Aloofness
Responsive	vs	Aloof
Affectionate	vs	Cold

Social Interests	vs	Lacking social interests
Dependent	vs	Independent
Friendly	vs	Hostile
Frank	vs	Secretive
Even-tempered	vs	Sensitive

Surface traits indicated more about perceptions of behaviour than the behaviour itself.

Source traits were the basic underlying structures that provided coherence to personality and explained behaviour. These are independent dimensions of personality. Table (b) illustrates one source trait, dominance versus submissiveness.

Table (b)

Source Trait		
Dominance	vs	Submission
Self assertive, confident	vs	Submissive, unsure
Boastful, conceited	vs	Modest, retiring
Aggressive, pugnacious	vs	Complaisant
Willful, egoistic	vs	Obedient

Eysenck proposed a general level of personality organization called the type based on interrelationships among traits (Eysenck, 1967, Eysenck, 1970). Eysenck believed that there were a small number of basic dimensions of personality that unified and directed behaviour but a few basic types encompassed a wide variety of traits (Eysenck, 1970). He detected two underlying personality dimensions - introversion - extroversion and

neuroticism. The typical extroverts were sociable, exuberant, liked parties and craved for excitement, and were frequently impulsive. In contrast, the typical introvert was shy, self controlled, quiet, introspective and inhibited rather than impulsive. People high in neuroticism tended to be emotionally unstable, easily aroused, worrisome, and frequently complained about anxieties and bodily aches. People low on neuroticism were emotionally stable, reliable, calm, and even-tempered, which were the personality characteristics of high performers.

I (iii) Self-Esteem

James (1890) analysed self in terms of its constituent parts, as the sum total of what the individual considered oneself including one's body, traits, characteristics, abilities, aspirations, possessions and other social affiliations. In encounters with others, an individual developed self-identity, which was reflected in consistency in dealing with others and with situations. The most important component of the self which helped an individual to develop an identity of himself/herself was self-esteem - the judgements made about one's own worth and the feelings associated with those judgements.

According to Rosenberg (1979), a person with high self-esteem was fundamentally satisfied with oneself and yet acknowledged one's faults while hoping to overcome them. High self-esteem implied a realistic evaluation of one's characteristics and competencies coupled with an attitude of self-acceptance and self respect. Quite a few people were found to have a relatively poor opinion of themselves. Research has shown that self esteem had a marked influence on behaviour, based primarily on the following three principles of self-esteem formation -

1. Reflected appraisals.
2. Social comparison
3. Self-attribution

The principle of reflected appraisals held that if others looked up to us and treated us with respect, then we would respect ourselves accordingly, but if they derogated or disdained us, our self-esteem would be low. The second principle of self-esteem formation was social comparison (Festinger, 1954). The basic tenet of social evaluation theory was that human beings learnt about themselves by comparing themselves to others. A second tenet was that the process of social evaluation led to positive, neutral, or negative self-ratings, which were relative to the standards set by the individual, employed in comparison. The principle of self attribution (Kelley, 1967) indicated that reports of inner states (such as hunger, excitement, sympathy) ordinarily understood to be based on private internal stimuli, could in reality reflect past training in the application of certain descriptive terms to overt behaviour, and the conditions under which it occurred. People derived much of their knowledge about themselves from direct experience of the effects produced by their actions. Thus the minority child who gazed at his poor report card would be expected to develop low self-esteem. Research showed that the specific component of self-concept of academic ability tended to be strongly associated with school achievement (Wylie, 1979).

Even when an association was found between academic performance and self-esteem, the question remained - is self-esteem a consequence of academic performance or a cause of it? There was theoretical support for both. Self-consistency theory holds that we tend to behave in accordance with our self-expectation and thus the self-concept was the cause of the behaviour. Self-attribution theory on the other hand, holds that we draw conclusions about us by observing our behaviour or its outcomes.

(a) Self-Esteem and Social Comparison:

Festinger's (1954) theory of social comparison processes maintained that people needed stable, accurate appraisals of themselves. People preferred to evaluate themselves with objective and non-social standards, but if such objective information was not available, they would compare themselves using other people. Originally the theory stipulated that the preferred source

for social comparison could be a person similar to the self-evaluator on the ability or opinion in question. Comparison with a similar other was maximally informative, according to Festinger, because it provided the person with a more precise, stable evaluation than with a different comparison person. Festinger (1954) also hypothesized a unidirectional drive upward generally interpreted to mean that people strove to be more capable than their current level of performance, and more capable than the persons with whom they compared themselves. Some investigators (for example Wheeler, 1966) interpreted the unidirectional drive upward, as meaning that people preferred to compare themselves to others whose performance/abilities were slightly better called upward comparison. Others such as Suls and Miller (1977) suggested that the drive to improve performance relative to others or to appear more capable involved an ego enhancing motive that was better served by making downward comparison to less fortunate others, enabling the evaluator to deduce that he or she was better off than a worse off other.

A central feature of Festinger's (1954) original proposal was the concern with the implications of social comparison processes for interpersonal interaction. One of the puzzles of self-esteem continued to be how people maintained such a positive self-view in the face of large and small setbacks, rejections and failures. One strategy involved comparing oneself with others who were worse off, a strategy termed downward social comparison by Wills (1981), so that one could feel relatively good about the self. In demonstration of the threat derogation effect, researchers showed that people will belittle or berate others when they themselves received failures and setback (e.g. Crocker, Major, 1989, Wills, 1981). According to Wills, (1981) when subjects were presented with a significant ego threat, they devalued and derogated other persons. The downward comparison theory posits that this effect was motivated by self-enhancement for the threatened person. Social comparison theory noted (e.g. Wood, 1989) that one could enhance one's satisfaction with one's lot by comparing self to worse off others - one may even enhance the self by thinking about the failures of other people in domains other than that at which one had failed. Such information might restore self-esteem in two ways

- by providing an informational base for domain specific self-enhancing downward comparison, and by providing information that one was generally better than others across domains. Crocker and Major(1989) had suggested that it was precisely because they engaged in self-serving biases that high esteem people were able to achieve and maintain their high self-esteem.

(b) Self-Esteem and Social Identity:

The Social Identity Theory of Tajfel (1981) identified a close relationship between an individual's self-concept and membership in the social group. People's group identification and the integration of group membership into their self-concepts ascribed the need for a positive self-image. Tajfel argued that the membership in high status groups contributed toward a positive self-image, whereas the opposite was true of membership in minority or low status groups.

Social Identity Theory assumed that individuals were motivated to achieve a positive self-image and that self-esteem was enhanced by more positive evaluation of one's own group. Given the emphasis of the theory on the importance of establishing inter group differences, any similarities between groups were likely to be important in instigating a search for distinctiveness. In general, Social Identity Theory predicted that similarity, whether of attitudes or status, should lead to increased inter group differentiation and outgroup derogation (Turner, 1978). Self-esteem was significant because one's judgement of oneself also affected the way one related to other people.

(iv) Socio-Economic Status:

Researchers have pointed out that an individual's education was directly affected by his/her social and home background, specially the encouragement by the parents. Hollingshead (1942), Anastasi (1958), and Harsh (1950) were of the opinion that the social behaviour of adolescents was related functionally to the position of the families occupying in the social structure of the society and each stratum of society tends to leave its mark on the personality of its individuals through habits of speech, ambition,

emotionality, similarities of experience and training. Hammond (1957), on the basis of a study of students from different disciplines concluded that even when intellectual training and attainments were equalised, the students with better socio-economic background performed better than the counterparts. Panda (1991) found family size, parent's education and general family atmosphere correlated highly with high scholastic achievement. Bloom (1985) found parent's role important for stimulating the child to perform well in academics. Besides parental encouragement, other factors were parental education, occupation, income, family size that were associated with the quality of stimulation in the home environment, which in turn was significantly related to the academic performance. Witkin (1965) found children coming from families of low socio-economic status more field dependent, and hence low academic achievers as compared to children from better status families.

1(v) Gender

Performance may also be affected by the sex of the individual. The patterns of socialisation have an impact on the educational attainment of both the sexes. According to Kohlberg (1969), males and females were socialized in different ways for sex identity and sex role. In societies where restrictions were imposed on girls, their lifestyle and educational attainments were different from those where fewer restrictions were imposed. In most societies, females were required to show greater obedience and more submissiveness as compared to males, which led to different performance of the females and males. This could be attributed partly to their socialization and partly to the expectations of the students. Rosni (1983) observed that when condition in society was conducive to stereotyping, it made the females stereotyped. According to Gross and Oppenheimer (1987), once tasks become gender stereotyped, the socialization process only helped in the perpetuation of stereotypes. Terman (1925) noticed this in a group of gifted child writers. Seven of the most gifted were girls, yet all the eminent adult writers in his study were men. Wolleat (1980) reported a decline in the professional and educational courses of females due to various personal and socio-psychological factors. Socio-cultural pressures and values assigned to

different roles to boys and girls were also attributional factors. Bruch (1970) stated that achievement was not considered as important for girls as for boys. Broverman (1970) observed that as a high achiever, a woman experienced considerable conflict owing to the fact that society expected her to possess as an adult woman quite a different set of characteristics than she was expected to possess as an out performer, if she was to be regarded as a mentally healthy woman.

The Present Study

Although academic performance and factors influencing performance received a good deal of experimental attention, academic performance of high achievers, the socio-psychological factors (self-esteem, social comparison processes, personality characteristics) influencing their performance distinct from their average counterparts needed attention. This study focussed on an understanding of the distinctive relationship among these.

CHAPTER II
REVIEW OF LITERATURE

CHAPTER -II

REVIEW OF LITERATURE

In this chapter an effort has been made to review the various studies related to the socio-psychological dispositions of high and average academic achievers and conclude if there are any gaps to be bridged by this study.

The review is presented as below:

- (a) Personality characteristics, interest, intelligence.
- (b) Self-esteem and social comparison processes.
- (c) Gender.
- (d) Socio-economic status.
- (e) Conclusion.

II.(a) **Personality characteristics, Interest and Intelligence:**

A number of researchers took interest in the study of characteristics of high achievers. Misra (1962) compared the personality structure of high and low achievers and found no difference between the two groups. Misra however, found that high and low achievers differed on anxiety and neuroticism. Muthayya (1964), studied personality correlates of thirty high and thirty low achievers in a school setting. Using the McClelland's technique he found that high and low achievers differed significantly in their need achievement scores. The high achievers had a significantly higher achievement need.

Borg (1965) studied high performers and found that they had an extraordinary memory, high level of abstract thinking, application of knowledge, intellectual curiosity, persistent goal directed behaviour, facility of expression, virtuosity and advanced knowledge. Sarason (1960), reported on the contrary that low achievers were more likely to respond with excess of anxiety, rather than its absence.

Singh (1965) revealed that academic achievement was significantly and positively related to intelligence, concept formation ability and academic motivation, and negatively to personal relations and anxiety. Bhatnagar (1967) in his study of personality variables as predictors of academic achievement found that the need for achievement was positively correlated to academic achievement of the students. Dhaliwal (1971) in a study of personality correlates of academic achievement concluded that high verbal ability, home, emotional and school adjustment corresponded to over achievement, whereas low verbal ability, emotional instability, assertiveness, and happy go lucky temperament were associated with low academic achievement. Sharma (1972) compared the over achievers and under achievers and showed that there were significant differences among the over achievers, average achievers and below average achievers with regard to their adjustment in school, home, social, religion and miscellaneous areas. The over achievers had better adjustment than the other two groups in all areas of adjustment.

Rao (1972) in a study on 328 male undergraduate students found that the over achievers' pattern of adjustment to the academic situation differed from that of under achievers. Aggarwal (1976) found that the high performing or gifted students had higher intelligence and high school achievement, were less neurotic, better adjusted, more dominant, had more self confidence than their average counterparts. Colangelo and Zaffrann (1978) had shown that students recognised as high performers or gifted were aware of their academic abilities and viewed themselves as capable and approached academic challenge with confidence and anticipated success. Koul (1978) studied the differences in extraversion and neuroticism factors between high and low intelligent students selected from tenth class. Hindi version of Eysenck's Maudsley Personality Inventory by Jalota and Kapoor were administered. Results showed that adolescents with higher intelligence were less neurotic than those with lower intelligence, and those belonging to higher socio-economic status were more extrovert.

Sidana and Singh (1979), conducted a study on eighty four girls of age five and six, divided into high and low achievers on the basis of scores obtained in two terminal examinations. Results indicated that low achievers were not able to discriminate their wrong responses from the right ones, while high achievers discriminated the right from the wrong responses. This indicated that the high achievers had more self-confidence and learnt predominantly by abstraction, generalisation, reasoning and problem solving, whereas their counterparts used paired association method and serial rote memory.

Ross and Parker (1980) undertook a comprehensive study of the academic and social self-concept of the high achievers and found that high performers score on academic self concept was significantly higher. Newfield and Cozac (1980), compared nineteen intellectually superior and nineteen intellectually average grade nine students on intelligence test performance, reading comprehension, mathematics achievement and overall composite achievement. Results showed that the intellectually superior children scored significantly higher than the intellectually average children. Sharma and Ahuja (1981) found the high achievers as field independent and average achievers field dependent. Agarwal (1981) in a study of secondary school students of Rajasthan noted that under achievers were less emotionally mature, less calm, less placid, less able to face reality, less compulsive and had poorer self control.

Devi (1982), conducted a study on thirty five high achievers and forty low achievers of Class VII to investigate if they differed on factors of adjustment, like neuroticism, guilt, inferiority feelings, personal worth and attitude to life. The results showed that high achievers were better adjusted as they were low on neuroticism, guilt and inferiority feelings and moderate in evaluation of their personal worth, whereas the low achievers had higher scores on neuroticism, guilt and inferiority feelings and over estimated their personal worth.

Chatterjee (1983), conducted a study to find out the importance of intelligence for scholastic achievement and found that high performers in science scored higher on intelligence test than their counterparts in humanities. Patel and Parikh (1984) studied a sample of 960 subjects divided into three groups i.e. talented, average and below average in order to find out the identification pattern and academic achievement of the students. Results showed that academic achievement of talented, average and below average differed significantly. Talented boys and girls tended to possess higher academic achievement than their average and below average counterparts. Ismail (1985) conducted a study over three hundred and seventy five third grade students and found that the intellectually oriented and independent students showed superior academic achievement.

Frierson (1985) compared groups of high performers with average performing elementary school children on measures of height, weight, personality traits, and creative thinking, and found that the groups differed significantly from each other on all the measures. Hota (1986) explored the type and degree of relationship between academic achievement and some of the personality traits of high achievers and low achievers from urban, rural and tribal areas. An Indian adopted and modified version of Thematic Apperception Test was used to assess the personality variables. The results showed that there was high degree of association among need achievement, aggressiveness, conflict level, self-assertiveness, future outcomes and the school achievement of the samples. The high achievers and low achievers differed significantly in their need achievement, aggression, conflict level, self-assertion and future out come.

Gallagher (1991), observed that students identified as high performers were generally superior in most academic areas compared to the low performers and that the low performers continued to be low even with the most brilliant instructional programme. Richardson and Crichlow (1995) tested two hundred and eighteen Barbadian students who had

selected arts or science for specialisation at advanced level of education. They found that within the arts sub-sample, the personality variable of achievement had a significantly positive relationship with the creativity measure of Incomplete Drawings (fluency), while Femininity emerged as negatively related to the Uses of Objects (originality). For the science sub-sample, a significant relationship was found between the personality measure of change and the creativity measures of Uses of Objects (fluency and originality). A line of research relating to productive student behaviour indicated that high-performing students had high specific intellectual ability as distinct from their average peers. Specific intellectual abilities in arts were reflected in aesthetic appreciation and technical ability.

Benbow and Stanley (1996) noted that high performers could achieve well in specific subjects not only at their grade placement, but also at much higher levels. In their study of thirteen year old students, who were in the top 1% of ability group in mathematical, spatial or verbal reasoning could assimilate and retain a full school year of high school biology, chemistry, latin, physics or mathematics in three intensive weeks of schooling. Ackerman and Heggestad (1997) reviewed various theories of intelligence, personality and interest with a view to identify potential overlap. They found that abilities, interests and personality developed in tandem, such that ability level and personality dispositions determined the probability of success in a particular task, domain, and interests determined the motivation to attempt the task and this distinguished the high achievers from their average peers.

Tucker and Hafenstein (1997) worked on Dabrowski's (1972), theory which proposed that over excitabilities in psychomotor, sensual, intellectual, imagination and emotional domains were part of high achieving students psychological make up. Data collected by them on five young children aged between four and six demonstrated behaviour consistent with the theory. Results showed that all the five children exhibited behaviour characteristic of three forms of over excitability,

intellectual expressed in striving for understanding, probing the unknown, and love for truth; imaginal: expressed in freeplay of the imagination expressed in wandering attention and frequent distraction; and emotional: expressed in extremes of feeling and inhibition. Zeidner and Schleyer (1999), in their study of academic self concept of high performing students in an educational setting collected data on seven hundred and forty three high achieving Israeli mid school students enrolled in grades seven to nine. The results pointed out that high performers had more positive academic self-concept in the regular mainstreamed classes and that their academic self-concept was higher than their average counterparts. In another study by Rolffhus and Ackerman (1999) one hundred and forty one undergraduate students were assessed for individual differences in knowledge and intelligence related traits. Results showed that the domain knowledge factored along the curricular lines. A general knowledge factor accounted for about half of knowledge variance, thus supporting the view that high performers had advantages over novices or low performers mainly because of the higher levels and more integrated knowledge. The finding of general knowledge factor suggested common causes for individual differences in academic knowledge across multiple domains such as humanities, science, civics and mechanics.

II.(b) **Self Esteem and Social Comparison Processes:**

Issues of equity and excellence have brought into focus researches on self esteem of gifted/out performers and the social comparison processes used by them. Tannenbaum (1962) administered a questionnaire to high school students asking them to rank the following three personality attributes: brilliant - average, studious - non-studious, and athletics - non-athletic. The results showed that the preferred attribute combination was the brilliant - non-studious - athletic, whereas the least desirable combination was the brilliant studious - non-athletic. The results further showed that a brilliant student who was non-studious and athletic was seen as acceptable by his or her peers.

In a study by Wilson and Berner (1971), it was found that subjects who had lower self-esteem tended to choose a referent for comparison, who was also lower in the hierarchy. Saxena (1972) pointed out that positive self-esteem was associated with higher academic achievement, implying that highly achieving students had positive self-esteem. In another study, Friend and Gilbert (1973), noted that the choice of a worse off other for comparison was particularly marked among those who felt threatened and had low self-esteem.

Brophy (1978) observed that the development of a favourable self-concept in children was dependent on their being successful and perceiving themselves as successful. Sharma (1979) assessed the role of self-esteem in academic achievement among students of Class X and Class XII in eight towns of eastern U.P. Results showed that self-esteem depended on intellectual and school status of students, and it was important for high achievement. Newfield and Cozac (1980), compared the self concept of intellectually superior and intellectually average students. Results showed that the mean self-concept score obtained was 50.53 for the intellectually superior, compared to 46.90 for the intellectually average grade VII students.

Shrivastava (1981) tested certain predictions related to the self-esteem of Indian students on alienation. Results revealed a significant main effect of self-esteem, and an interaction effect of self-esteem and academic performance on alienation. It showed that the high self-esteem high- academic performance students experienced significantly lower alienation than the low self-esteem high academic performance and low self-esteem low academic performance students.

Rosenholtz and Simpson (1984) in a review of the literature noted that older children with high ability engaged in frequent social comparisons than younger children with high ability, demonstrating the importance of age. Singh (1987) tested two hundred science students in Higher Secondary Classes on a self-concept test. Academic achievement was

determined on the basis of marks obtained in the Board Examination. The results showed that self-concept was positively related to academic performance, indicating that the high performers had positive self-concepts. Haynes, Hamilton-Lee and Comer (1988) examined the differences on the six self-concept dimensions, by selecting one hundred and forty eight above average, average and below average achieving sophomores in an urban high school. A multiple analysis of variance indicated significant differences on four of the six self-concept dimensions. Above average and average students differed significantly from below average students on intellectual, school status, physical attributes and appearance, happiness and satisfaction self-concept dimensions. Crocker and Cheeseman (1988) investigated in a sample of one hundred and forty one children in three infant schools in the mid lands as to how they ranked themselves vis-à-vis others on same academic dimensions. Results showed that children used academic criteria, like; high reading ability, mathematical ability, always working, working hard, to rank others higher than themselves. It showed that children quickly acquired knowledge of academic criteria for comparing themselves and others. Falchkov and Bond (1989) subjected quantitative self-assessment studies that compared self and teacher marks, to a meta-analysis. Results indicated that students in advanced courses appeared to be more accurate assessors of themselves, and students of science appeared to make more accurate self assessments than those in other areas of study.

Taylor and Lobel (1989) pointed out that in certain groups under threat, comparison activities diverged, with explicit self-evaluation made against a less fortunate target, but information and affiliation were still sought from more accurate others (upward contacts). Wood (1989) in a review of various social comparison studies upheld those which suggested that when individuals evaluated an ability, they tended to choose tasks that were diagnostic of that ability within the range of their uncertainty, i.e. a highly able person frequently chose a task that discriminated between high ability and low ability levels. Atherly (1990)

compared three schools and found significant differences between the children of low academic ability and low socio-economic status in school C and children of higher ability/higher Socio-economic status in School A & B. on the factor of Happiness and Satisfaction and behaviour. Results pointed out that the small sample of children in Group E who had high academic ability but low socio-economic status were in the top 'set' for mathematics and English, and who were therefore academically akin to the pupils in School A. In terms of reading ability both had a higher total self concept score and a higher general and academic status than the pupils in higher ability school (59.97 - Group E, 55.5 School A), (4.70 - Group E, 3.55 School A respectively), pointing out that high self concept was related to academic status, irrespective of socio-economic status.

Thompson and Crocker (1990), conducted a study on 255 male and female subjects to test Will's (1981) downward comparison hypothesis of in group bias, using the minimal group paradigm. An analysis of variance with self-esteem (low/moderate/high), performance expectation (above/below average) performance attribution (situation/disposition) and feed back (success/failure) as source of variance between subjects was performed. Results showed that low self-esteem subjects rated members of the out-group more negatively than high self-esteem subjects. High self-esteem subjects engaged in more downward social comparison to enhance their self-esteem relative to both member of the out group and their in group.

Tesser and Moore (1990) whose thirty one male and thirty one female students to investigate the independence of self-evaluation maintenance processes. The results showed that low self esteem individuals reported more negative affect ($M = 42$) than high self esteem individuals. The predicted self-evaluation maintenance effect also emerged. Being out performed by a friend on a high relevance dimension produced more negative affect than being out performed on a low relevance dimension.

Hogg and Abram (1990) investigated if depressed or threatened self-esteem promoted inter group discrimination. Results of the study on eighteen males and seventy female first year psychology students showed that subjects who were categorised having lower transitory self-esteem engaged in greater inter-group discrimination than those who were not so categorised or had higher self-esteem. Higher self esteem endowed the high performers group with a more favourable relative evaluation than the lower self-esteem.

Rhodes and Wood (1992) conducted a meta-analytic review to determine whether message recipients' self-esteem or intelligence predicted its influenceability. Results of the study showed that those having moderate self-esteem proved to be more influenceable than those having low or high esteem. Those having low self-esteem had difficulty receiving the message; while those high in self-esteem tended not to yield. The results further showed that recipients having low intelligence were more influenceable than highly intelligent ones. In another meta-analytic review, Hoge and Renzulli (1993) attempted to explore the link between giftedness or high performance and self-concept. Results of the study showed that the gifted or high achievers displayed slightly higher self-concept than more average children. The high achievers exhibited more positive academic self-concepts than the comparison group.

Crocker (1993) conducted a study in which forty male and female undergraduates participated. The self-esteem of the participants was measured, and then they were given either success or failure feedback on a social sensitivity test. As part of a second unrelated study, these participants were made to listen to sentences describing positive and negative behaviours of others. Results showed that subjects who were high in self-esteem recalled three times as many negative behaviours of others following failure than following success. Moderate and low self-esteem subjects did not show that pattern.

Schultz and De Paulo (1996) included twenty eight female introductory psychology and art students in their study and investigated how low self-esteem subjects would react to failure or criticism. Results showed that artists who were positive about their own work were also positive about the other artist's work. High self esteem artists who seemed to be trying to appear competent by being critical, did just the opposite. Benbow and Stanley (1996) in a meta-analytic study of various researches on excellence pointed out that intellectual talent generated considerable ambivalence threatening the self-esteem of other. This resulted in a phenomenon labelled as envy and punishment by peers. Within a general ambience of resentment the pursuit of excellence through isolation, prejudice, teasing, stereotyping, alienation, intimidation and violence was directed towards the high achieving peers by the low-esteem average peers.

Patrick (1997) pointed out that the ability of the threatened group to monitor and regulate one's social interactions, was strongly associated with their performance at school and their social competence. Relatedly, such children have been viewed as having more limited adoptive schema for social interactions and used undesirable schema more often than competent children (e.g. Crick and Dodge, 1994). In a recent study, Exline and Lobel (1999) pointed to the out performance related distress faced by high performers. Individuals experienced ambivalence, or discomfort when they out performed others, even when their superior status carried very favourable self-evaluative implications. Upward comparison i.e. comparison against those faring better than the self led to negative effect (e.g. Wheeler and Miyake, 1992) often leading to feelings of envy (e.g. Salovey and Rodin, 1984), inferiority or relative deprivation. Gray, Boini and Hodges (1999) evaluated the role of social comparison processes in perceived academic competence as a function of the specificity of the relationship with peers (i.e. friends vs non friends). Participants were 1002 French Canadian children (girls = 507, boys = 495) from 10 elementary schools. The results showed that academic achievement

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was positively related to perceived academic competence. Further, the relation depended on the performance of close friends. The scholastic achievement was maximised when reciprocated friend's achievement was low, and minimised when reciprocated friend's achievement was high. Comparison with best friends having high levels of achievement threatened self-evaluations by minimising the contribution of children's own performance and vice-versa.

II.(c) **Gender Differences:**

Researches have examined the correlation among gender, parental behaviour, performance and children's socialisation (Peterson and Rollins, 1987). Some studies have found that females and males experience considerably differing social worlds within both the family and the larger social context (Block, 1983; Peterson, Rollins, Thomas and Heaps, 1982). Work by Chodorow (1978) has focussed exclusively on the role of gender in family interactional patterns and experiences. It has been suggested that the individualisation process may be different for female as compared to male, offspring because of the differing ways in which males and females may be socialised and connected to the family of origin (Gilligan, 1982).



Early social experiences for females may provide the foundation for intimacy and generativity on which social responsibility, competence and commitment are constructed. Sensitivity to social concerns, the assumption of responsibility for social caring, and a social orientation that is personal rather than positional may be the result of female socialisation. (Gilligan, 1982).

Early socialisation for males may be related to greater autonomous thinking, clear decision making, less generative concerns. Males are encouraged within on society to be independent, instrumental, and exploratory and perhaps, in general, more individuated than females at all ages. (Bartle, Anderson and Sabatelli, 1989; Bartle and Sabatelli,

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1989; Lopez, Campbell and Watkins, 1986, 1988; McDermott et al, 1983).

Gender differences in performance had been of interest to researchers, since Maccoby and Jacklin (1974) concluded that differences in attainment among the sexes were well established in the areas of mathematics, spatial and verbal abilities with boys excelling in the first two and girls in the latter. Other studies (Kelly, 1978) supported those earlier findings, which also indicated a drift away from the sciences in the middle years of secondary education among girls and lowering of attainment as compared to boys.

Finn, Dulberg and Reins (1979) in a meta-analytic study of various studies related to sex differences outcome at the primary and secondary school level and attitudes towards mathematics in the 12 country survey (International Association (IEA)), found that boys were more interested in mathematics. It was found that on measures of ability and achievement (science) the variations between the sexes were small when compared with the variations within the same sex groups. The gap was larger in physical sciences than in biology. Girls out performed boys in biology in particular age groups. In literature, 14 years old girls performed better than boys in all participating countries. Smithers (1982) pointed out that ability was strongly related to the choice of science among boys and girls, as those choosing science were mainly from the high ability group, particularly the girls.

Boli, Allen and Payne (1985), in a meta-analysis of articles regarding performance differences between the sexes in various academic subjects especially mathematics and science, cited Steinkomp's large scale studies involving two hundred ninety eight different samples, and concluded that there were consistent but substantively small differences favouring boys in achievement and attitudes towards science. In contrast to mathematics, the difference favouring boys was greater in achievement than in attitudes. Further, women entering the

sciences and engineering tended to avoid more technical fields in favour of other fields requiring less of mathematics and science.

Aiken (1986) noted in a review of many of the correlational studies and surveys that boys were superior to girls in mathematical computation and problem solving and that differences were more noticeable in the case of mathematically talented youth, the majority of whom tended to be boys. Kelly (1988) administered sex stereotyping inventories to pupils entering ten co-educational comprehensive schools and repeated the tests two and a half years later. Results showed that girls who saw themselves as masculine were slightly more likely to choose physical sciences, while girls who saw themselves as feminine were slightly more likely to choose biology and out performed boys. However, boys with a masculine self-image achieved slightly worse in science than boys of similar general ability, whereas girls with a masculine self-image achieved slightly better than other girls. In an analysis of the science performance of pupils attending single sex and mixed schools, Bell (1989) showed that, on an average pupils attending the former achieved higher scores. However, when only comprehensives were considered, there were no statistically significant differences between single sex and mixed schools in the mean performance of boys or girls. Therefore, ability caused differences between the sexes.

A review of various studies by Bradberry (1989) showed that only ten girls to every fifteen boys achieved higher grades in mathematics. An examination of a set of one thousand 16+ mathematics scripts revealed that the widest discrepancy between the sexes were found with scale or ratio problem, spatial problems, space-time relationships or probability questions. Eccleston, Borkin and Burrows (1990) analysed the performance of boys and girls of sixth form college at GCE (A) level over a four-year period and found that the boys out performed the girls in all subjects, except the english language and literature.

Haggerty (1991) reviewed a number of studies related to gender differences in science achievement and participation, and suggested that achievement differences could be understood only after taking note of the effects of attitudes and participation. It was also true that females and males approached science differently, and that the approaches were an important factor in the achievement differences of males out performing the females. Erickson and Farkas (1991) administered a set of 23 multiple - choice items (that displayed significant gender differences on a previous British Columbia Science assessment) test to two hundred thirty eight grade XII students. Results indicated that females consistently appealed to school-based experiences much more than the males, and that negative reactions were seen for many of the females than males, which led to gender bias in science achievement.

Waiver and Stenberg (1992) examined sex differences in scores on the mathematics section of the Scholastic Aptitude test (SAT-M) of men and women, who performed similarly in first year college mathematics courses. Results showed that women scored lower than men of comparable academic performance. Feingold's (1992) meta-analysis of the contemporary researches, that used various methods to evaluate sex differences in the general population, pointed out that males scored higher than females on tests of general knowledge, mechanical reasoning and mental rotations, while females scored higher than males on tests of language usage and perceptual speed. Boys had slightly higher means than girls on tests of mathematical reasoning. Shaalvik and Rankin (1994) examined gender differences in mathematical and verbal self-concept, self perceived skills, and motivation, and whether such differences were larger than could be explained by differences in achievement. Subjects were 356 sixth grade and 353 ninth grade Norwegian students. Results showed that boys had higher mathematics self concept and self perceived mathematics skill than girls. Girls had higher verbal achievement than boys, and boys had higher mathematics motivation but lower verbal

motivation than girls. The differences in mathematics motivation were explained in terms of differences in self-perceived abilities.

Tartre and Fennema (1995) chose sixty high school students (32 females and 28 males) to examine the relationships of selected cognitive and affective variables to mathematics achievement of both male and female students. Results showed that males tended to stereotype mathematics as a male domain more than females, and there were consistent gender differences in the roles of spatial and verbal skills in predicting mathematics achievement. Whitehead (1996) tested 195 girls and 147 boys to investigate the relationship between perceptions of school subjects as masculine or feminine and attitudes towards academic subjects. Results showed that more boys studied science and that science was seen as masculine and arts and language as feminine. In another study, Lightbody and Durndell (1996) tested 106 school pupils aged 16 - 18 years, (55 male and 51 females) attending three secondary schools to investigate whether there existed any disparity in the uptake and experience of education, both within schools and in further and higher education. Results showed that the physical sciences and technological courses failed to attract increased number of females, and that they found more male high achievers in physical sciences and technological courses than female students.

Stanley (1997), undertook a meta-analysis of various studies related to gender differences on aptitude and achievement, to evaluate attitudes and interests of able youth. It was pointed out that girls and young women excelled boys and young men somewhat in most language usage areas. The opposite was true for most other school subjects, especially physics and computer science. Stewart (1998), chose students of Class 12 from two boys and two girls grammar schools, three sixth-form colleges, and two comprehensive schools and investigated the differences in ability and attitudes of males and females, who took a positive decision to study physics beyond the compulsory minimum level. Results showed that females choosing A

level physics were of a higher ability than the corresponding males. Rogers, Galloway, Armstrong and Leo (1998) compared the motivational responses of girls and boys in the curriculum areas of mathematics and English. Results showed that two motivation measures produced different patterns of results. The task-based measure showed no gender differences, while the other measure indicated a pattern of differences broadly suggestive of an advantage for girls. Motivational style, within the domain of mathematics and English composition did not show any evidence of gender differences, but subject differences.

II.(d) **Socio-Economic Background:**

Researches have pointed out that differences in socio-economic status were likely to have their impact on personality patterns of individuals and hence on their academic achievement. Anastasi (1958) was of the opinion that social behaviour of individuals was related to the socio-economic status of the family which influenced their personality through attitudes towards themselves, others and their future goals or ambition. Koul (1978) selected 500 boys and five hundred girls from schools situated in industrial and cantonment areas, to study the differences in extraversion and neuroticism among such adolescent boys and girls. The adolescents had both high and low levels of general intelligence and socio-economic status. Results showed that the adolescent students belonging to higher socio-economic status were more extrovert than their counterparts. The triple interaction (sex x intelligence x socio-economic status) was found to be significant for neuroticism. Smither and Collings (1982), in a study of 200 sixth-form pupils in twenty schools and different subject combinations, investigated the impact of social class background on the choice of science. Results showed that social class was significantly associated with the subject choice, as most of the pupils from higher social class backgrounds were more likely to opt for science and excel in it.

Patil (1983) selected 100 students each from urban and rural background from various high schools and investigated whether high performance correlated with socio-cultural factors, and if the degree of motivation encouraged students to solve more number of problems. Results showed higher mean scores on problem solving and motivation for urban than rural students. Chatterjee and Paul (1984) chose 20 students each from three schools and investigated differences in science achievement related to different economic-cultural contexts. Results showed that urban students had significantly more field independent styles ($p < 0.01$) than their rural counterparts. Urban students showed significantly superior performance in science than the rural group ($p < 0.01$). In another study, Sharma (1984) over 237 students of Class IX found that parental education was highly associated with the academic achievement of their sons and daughters.

Frierson (1985), in a study of high and average ability elementary school children from upper and lower status backgrounds showed that group differences between high and average ability children were associated with differences in socio-economic background. Singh (1987), compared 200 students (100 from urban and 100 from rural areas), and noted that self-concept was positively correlated with achievement, and that students from urban schools possessed significantly more positive self-concept than their counterparts in rural areas. In another comparative study, Kniveton (1987) divided a group of students on the basis of intelligence (high and low), and socio-economic status (working class and middle class children). Results showed no difference by intelligence, but socio-economic status was positively correlated with behaviour. It was found that irrespective of intelligence, students from working class background misbehaved more in classrooms than their counterparts belonging to middle class.

Marjoribanks (1987) collected data from 883 Australian families to examine associations between family contexts and children's school

outcomes. Results showed that in the boys' sample, family social status and parents' instrumental orientations interacted positively with intellectual ability and were related to the achievement scores. For girls, however, family status only had a linear association with achievement. Parents' instrumental orientations and girls' ability interacted negatively in relation to mathematics performance. Foon (1988) investigated the effect of mother's employment on adolescent orientation and academic performance over 1975 students (896 males and 779 females). Results showed that boys having mothers employed in low status occupations tended to have more external control orientation and lower preference for mathematics than males whose mothers were employed in high-status occupations. For females, mother's employment status was associated with high preference for mathematics and a favourable attitude to perform well in school.

Atherby (1990) conducted a study to investigate the impact of socio-economic status on academic ability and self-esteem. Results showed that children's academic and behavioural problems cannot be wholly attributed to low self-esteem. Lamb and Daniels (1993) tested 48 girls from 4th grade from rural background to study the impact of their background on mathematics preference as a subject of study. A quasi-experimental design using a pre-post test and control group was used. Results showed no statistical significance for the pre-test scores, but experimental group scores increased after participation in the intervention programme. Based on the results of the post test scores, it was concluded that the intervention programme made a significant difference to the girls mathematics attitudes. This showed that sex differences in mathematics were not mainly due to ability but due to attitudinal and background factors. Another study by Kivilu and Rogers (1998) with 341 high school students from the urban and rural regions showed significant variations by gender and cultural experience in achievement.

II.(e) CONCLUSION

The above review showed that high achievers have a more stable personality, are intellectual and very curious, exhibit persistent goal directed behaviour and advanced knowledge. High achievers engaged in academic tasks for personal interest and satisfaction, and are behaviourally active participants in their own learning which leads to higher academic performance. They are different from their peers in that they exhibit exceptional specific talents as well as have a very high intelligence. Whereas the average and low achieving individuals showed slower and less efficient information processing strategies, the high achievers showed extremely rapid and flexible strategies. The high achievers showed a strong positive correlation between academic self-concept and academic performance as compared to their low achieving counterparts.

The high achievers showed a positive self-esteem and in the face of possible failure, in particular, they engaged in more downward comparisons to maintain their positive self-image. The high achievers can be envied, abused, and even physically assaulted by the low achieving low esteem counterparts, which affected their academic pursuits. Thus, often, they are forced to hide and deny their capabilities, which has a counter effect on their self-esteem. The high achievers then employ other strategies to progress academically by isolating themselves from the peers, but craving internally to belong to the peer group. They are labelled as snobbish and proud by their low achieving peers, for exhibiting excellence. Taken together, high achievers have a more positive global self-concept than their average or low achieving counterparts.

High performance is not limited to a particular sex. There are more high achieving girls in humanities than in science due to the social fact that science and mathematics are considered more masculine subjects and meant for the boys. Girls in science and mathematics are only

those who have exceptional ability, while boys may study mathematics and science irrespective of their abilities.

A comparatively poor academic performance was found associated with self- concept of the students from rural background and low economic status. A peasant father or a business man being far away from the maddening crowd may desire to utilise the service of the son in his own professional pursuit. This naturally would take away the son from his studies as well as the company of the peers. In urban areas the parents take personal interest in the education of their children, and to satisfy their educational aspiration. Mother's employment encouraged children to have a more positive attitude towards studies. This also supplemented family income and the model role of the mother was imitated by her children.

It can be concluded that high performers are better and different from average performers . The average performers are needed to be channelised towards positive path through special educational provisions and curriculum so that their talents would be developed and they can become assets for the nation. Such academic and organisational will was however found lacking in India. Also there were not many studies to demonstrate academic and psychological differences of out performing males and females from their average peers in the inclusive/normal system. The values of excellence and equity were constantly projected as contradictory and not reachable given the contemporary educational and legislative provisions. This research attempted to bridge this gap to some extent by exploring the differences in socio-psychological processes experienced by the high and average performing males and females in two types of schools.

CHAPTER III
METHODOLOGY

CHAPTER III

METHODOLOGY

This chapter contains the problem statement, assumptions, objectives, hypotheses, sample, research design, variables, tools of data collection, procedure and methods of statistical analysis.

III.(a) PROBLEM STATEMENT:

Some of the socio-psychological dispositions of high and average achievers in a senior secondary class were compared to understand the dynamics of their performance.

III.(b) ASSUMPTIONS:

The present study had the following assumptions:

1. The high performing male and female students in science and humanities may have positive self-esteem and personality characteristics distinct from the average performing males and females in science and humanities, because they are performing at a different levels.
2. The family backgrounds of high performing male and female students in science and humanities may be different from average performing male and female students in science and humanities for they may be receiving enhanced academic training and encouragement from family which help them to show better performance.
3. High performing male and female students in science and humanities may use different social comparison processes to maintain their positive self-esteem than their average counterparts because that may help them to maintain high performance.
4. Differences in subject, achievement, gender and school type may interact with each other and affect the dynamics of performance,

personality characteristics, self-esteem and social comparison processes significantly because they are distinct from each other.

III.(c) OBJECTIVES:

The following objectives were laid down -

1. To compare the high performing male and female students in science and humanities on various socio-psychological dispositions (personality characteristics, self-esteem, social comparison, socio-economic status).
2. To compare the average performing male and female students in science and humanities on various socio-psychological dispositions (personality characteristics, self-esteem, social comparison, socio-economic status).
3. To compare the socio-economic status, personality characteristics and self-esteem of high and average achievers in science and humanities.
4. To find out the relationship among performance, self-esteem, social comparison processes and personality characteristics of the high achievers and average achievers.

III.(d) HYPOTHESIS:

The following hypothesis were formulated -

Hypothesis - 1. There will be significant main effects of school type, subject, achievement and gender on various socio-psychological dispositions (personality characteristic, self-esteem, social-comparison), performance and socio-economic status.

Hypothesis - 2. There will be significant interaction effects of school type, subject, achievement and gender on various socio-psychological dispositions

(personality characteristic, self-esteem, social-comparison) performance and socio-economic status.

Hypothesis - 3. There will be differential pattern of relationships among performance, personality, self-esteem, social comparison and socio-economic status of high and average achievers, male and female students, students of science and humanities in different types of schools.

III.(e) DESCRIPTION OF THE SAMPLE:

The sample was selected through a two-stage procedure:

- (1) Selection of Schools
- (2) Selection of Students.

(1) Schools:

Two schools were selected, one prestigious Public school and another Government school in which high performing students from rural areas were admitted.

- (a) School 1: The Public school was a big school having students from urban areas. Admission was highly competitive and it charged high fees. It had large number of students in secondary and senior secondary classes in science and humanities grouped into a number of sections with separate libraries for each section. The science sections had a large science laboratory with all facilities for the students to conduct various experiments. The school held weekly tests for students both in science and humanities sections to keep record of the progress and performance of its students in their respective academic subjects. Students with lower than expected performance were given extra attention through extra classes after school hours. For the meritorious students, the school organised inter school competitions and other activities. The school had two counsellors who looked into the academic and personal

problems faced by the students. Regular yoga classes were also held.

- (b) School 2: In this Government school, students were admitted on the basis of their high performance in earlier school in rural areas. The admission was competitive, but only those from rural Government schools came. It charged nominal fees and yet tried to provide necessary good facilities. There were two sections in Class XI, one each in the science and humanities with varied combination of students. The school paid more attention to the high achievers by partially segregating them from the rest of the students. It arranged for them special classes of a higher standard than what was being taught in the regular classes. Special question papers were also arranged by the school for examination held from time to time for the high achievers.

(2) Selection of Students:

Students of one section each from science and humanities in both the schools were selected as sample of study. All the students were from Class XI science and humanities. A total of seventy-four students in science and sixty-seven students in humanities were tested in the first school. A total of thirty students in science and twenty-six students in the humanities were tested in the second school

III.(f) RESEARCH DESIGN:

In order to study the main and interaction effects of school type, subject, achievement and gender on exploratory variables, an ex-post factorial research design was used. According to Kerlinger, factorial design is the structure of research in which two or more independent variables are juxtaposed in order to study the independent and interaction effects on a dependent variable. The study used a 2x2x2x2 factorial design. The first two units of the design referred to school types (Public School, Government

School), the second unit to subject (science and humanities), the third to achievement (high academic achievers and average achievers) and last two units to gender (male and female).

III.(g) VARIABLES AND DEFINITIONS:

The following variables were included -

Matching Variables:

School type - Public School and Government School.

Subject - Science and Humanities

Achievement- High achievers and average achievers at the Class X Board Examination (on the basis of above and below the group means).

Gender - Male and Female.

Demographic Variables-

Father's educational qualification - whether graduate, below graduate, post-graduate, professional.

Mother's educational qualification - Whether graduate, below graduate, post-graduate, professional.

Father's occupation - Whether in Service, business, professional.

Mother's occupation - Whether working or non-working.

Family income - The total income of the family (husband and wife) per month.

Measured Variables:

Performance was defined as the total score earned by a student in Class X Board Examination.

Personality denoted the dynamic organisation within the individual of those psychological systems that determined his or her unique adjustment to his or her environment. Muthayya included dominance, empathy, ego ideal, need-

achievement, self-confidence, pessimism, neuroticism, introversion, dogmatism as nine dimensions of personality. These characteristics were used here. Intellectual functioning was also included as one dimension of personality.

Dominance - Individuals whose personality is characterised by dominance are found more often to possess leadership qualities. Such individuals have tremendous power to influence or direct the behaviour of others by suggestion, reduction, and persuasion or command.

Empathy - This involves the realisation and understanding of another person's feelings, needs and sufferings.

Ego-ideal - This is composed of fantasies which portray a person as a hero doing great deeds or achieving recognition on the whole, Ego-Ideal represented the individual's highest hope.

Need-achievement - This implies a desire or tendency to compete with a standard of excellence where,

- i) Winning or doing well is the primary concern.
- ii) Affective concern is over one's goal attained.
- iii) Any performance, its outcome or the capacity to produce it, is viewed, experienced and judged within a framework of reference based on various standards of excellence.

Self-confidence - It indicates the extent of assurance one possesses about one's capacities and ability in not only confronting problem situation but also in finding a solution to them.

Pessimism - It is a tendency to look upon the future with uncertainty, disbelief, accompanied by expectations of negative happenings regardless of the actualities of the situation.

Neuroticism - This has been summarised in terms of four major categories: excessive and conflicting motivations, emotionality and instability, inadequate coping procedures and low self-esteem.

Introversion - The introvert person tends to be self-centred showing insufficient attention to practicability. They tend to be more sentimental than realistic. The individuals tend to behave in a serious, quiet, constrained manner and avoid social gatherings. The introvert tends to be highly ego involved in achievement or in a competitive situation and thus vulnerable to the threat of failure.

Dogmatism - It is a closed way of thinking which would be associated with any ideology regardless of the content: an authoritarian outlook towards life and intolerance towards those with similar beliefs.

Intellectual Functioning - This determines the global or mental capacity of an individual to think rationally, to act purposefully in a particular direction, and to accomplish a particular goal or task successfully. This is one of the important personality domains of high performers.

Self-esteem has been defined in terms of what a person felt about the discrepancy between the way one was (the self-image) and the way one would like to be (the ideal self). Rosenberg stated that simple sentences such as 'I feel that I have a number of good qualities', 'I feel I do not have much to be proud of', 'Sometimes I think I am no good at all', taken together could meaningfully assess the value that people place on themselves.

Social Comparison referred to the tendency of the person to evaluate self by comparing with others in the group. Gibbons and Bunnk, pointed out that social comparison was a way of acquiring information about the self, and identified self-evaluation as the underlying motive for comparison, and opinions and abilities as two dimensions of self-evaluation. With respect to abilities, the primary question was. "How am I doing?" For opinions, the issue

was, 'what should I think or feel?' Gibbons and Bunnk included both types of questions. These were used here.

III.(h) TOOLS:

A checklist was prepared by combining some of the personality characteristics included by Muthayya in his Multivariate Personality Inventory and of gifted students by Jaiman (1994).

The checklist had a total of fifty items on dimensions such as Dominance, Neuroticism, Empathy, Need-Achievement, Ego Ideal, Introversion, self-confidence, Dogmatism, Pessimism and intellectual functioning. It included

- 5 items for empathy,
- 4 items for ego-ideal,
- 5 items for pessimism,
- 7 items for neuroticism,
- 6 items for introversion,
- 5 items for need achievement,
- 5 items for self confidence,
- 3 items for dogmatism,
- 5 items for dominance,
- 5 items for intellectual competence.

The obtained reliability co-efficient for this scale was 0.52. The maximum obtainable reliability co-efficient for the scale was 0.72 and hence the obtained reliability co-efficient was considered satisfactory.

Each of the ten personality dimensions were scored separately. The scoring key was tuned in the direction of the presence of the attribute. If the answer of the respondent corresponded with the scoring key, it indicated the presence of a particular trait. The higher the score in each trait, the greater was the prevalence of the trait in the respondent concerned. Item 13, Item 33, Item 40

were scored in the reverse order. Response - Yes was coded as 2, Response - No as 1.

Rosenberg's Self-Esteem Test (1965) was used to test self-esteem. It had six items each testing how an individual rated herself/himself i.e. her/his self worth. There were five choices for answering a question ranging from strongly agree, agree, neither agree nor disagree to strongly disagree. Scores for these options ranged from 5, 4, 3, 2 and 1. The higher the score, higher was one's self-esteem. Item 4 and Item 6 were scored in the reverse order.

Iowa Netherlands Comparison Orientation Measure devised by Gibbons and Bunnk (1999) was used after making sure that the items were meaningful for the groups, to test the social comparison orientation. Nine items were taken. The statements represented situations that pointed out how an individual rated him/herself compared to others in different social situations - in school, class and home. The scoring procedure was similar to that of Rosenberg's Self-Esteem Test. Item 8 in the scale was scored in the reverse order.

Two items measuring social comparison processes were also included. One item dealt with whom an individual compared himself/herself whenever he/she was successful in accomplishing his/her goal in life, and another dealt with whom an individual compared himself/herself in life, whenever he failed to accomplish his/her goal. The response choices ranged from with someone doing better than me, someone doing like me, someone worse than me and with none. Scores for these options ranged from 4, 3, 2, 1.

Student's Class X Board examination scores were taken from the school records. High achieving and average achieving male and female students in science and humanities were identified on the basis of percentage above the group mean (high achievers) and those below the mean (average achievers).

Achievement -High achievers were coded as 1
- Average achievers were coded as 2

- Gender - Male was coded as 1
 - Female was coded as 2
- Subject - Science subject was coded as 1
 - Humanities was coded as 2

Demographic variables which included parent's occupation, their education and family income, were recorded on a personal information sheet filled by the students. The information on parental education, parental occupation, family income were coded according to the predetermined criteria as follows:

<u>Parental Education</u>		<u>Code</u>
Others	-	4
Professional	-	3
Graduate	-	2
Below graduate	-	1

Parental Occupation

Father's Occupation:

Professional	-	3
Business	-	2
Service	-	1

Mother's Occupation:

Working	-	1
Non-working	-	2

Family income:

Family income per month:

Rs.20,000/- and above	-	3
Rs.10,000/- and above	-	2
Below Rs.10,000/-	-	1

Types of School:

Public School	-	1
Government School	-	2

III.(i) PROCEDURE:

School 1:

Prior permission was sought from the Principal in the public School (School 1) to administer the tests on the students of Class XI science and humanities sections. An official letter specifying the nature of study and duration of the test was sent to the Principal through the Vice-Principal. After permission was

granted, a photocopy of the official letter was submitted to one of the Counsellors of the school who fixed the days and time when to administer the test. Before administering the test several meetings were held with the Counsellor to know about the school practices and how the high performing students were taught/treated in the school. Students were also met for establishing proper rapport with them. They were made to feel relaxed by asking their names, interests, career options and so on. When it was told that the test focussed on their personality profile, self-esteem, they became even more interested and listened attentively.

After rapport was established, the test was administered to students of both science and humanities section on fixed days. No time period was fixed for completion of the test, but it took 20-25 minutes to complete the test. It was made sure that students had no problem in filling up the test booklet and that they completed all the items. However, there were some students in both science and humanities sections, who had some difficulty in reporting the family income correctly.

School 2:

In the Government school also a request letter for permission specifying the nature of study and duration of the test, was submitted to the Principal so that the test could be administered to students of Class XI science and humanities section. The counsellor of the school fixed the days and time for the administration of the test. Before administering the test proper rapport was established with the students. Since the students were not very conversant with English language, Hindi was also used to explain them contents wherever necessary. The students were asked their names, interests, the subjects they liked most, the teachers they preferred most and so on. After students became quite relaxed and attentive, the test was administered to the students of Class XI science and humanities. Care was taken to see that the students answered all the items. However, the family income and parents educational qualification part was reported with much difficulty.

Discussion with Students:

A focussed discussion was held with a group of twenty students, ten each from humanities and science section in both the schools. From the discussion with students in public school, it was learnt that the school held aptitude tests from time to time for identifying the high performers or the talented students. Some students pointed out that the ability grouping system was practiced in Class XI and Class XII till two years back. The system was prevalent now only in the primary and secondary sections. The students pointed out that the high performers were made to solve harder problems from the same text book in the regular classes only. Sometimes, the high performers were made to teach their weak classmates in particular subjects after school hours or in the library periods. The students said that high performance was not the prerogative of any particular sex, and that both girls and boys performed equally well in science and humanities section.

The students in the Government school revealed that a lot of attention was paid to the high performers in the class. Special question papers of I.I.T. standard were given to the students to evaluate their scientific and technical aptitudes. The students also pointed out that humanities section was looked down and that only weak students (boys and girls) opted for the subject. More attention was paid by the school to the students in the science section. Scholarships were given to high performing students.

III.(j) **STATISTICAL ANALYSIS:**

The data had been statistically analysed by using the techniques of ANOVA, and Correlations. Means and standard deviations were calculated for all the measured variables. Analysis of variance was computed in order to detect the treatment effects of school, achievement, subject, and gender on different measured variables. The correlation analysis was done to find out the relationships among different variables namely performance, self-esteem, social comparison process, socio-economic status, and personality for the various groups and total sample.

CHAPTER IV

RESULTS

Chapter IV

Results

Results have been analysed by using statistical tools of ANOVA, Mean, S.D. and correlations on different variables for different groups.

Performance

Table 1 shows the main and interaction effects of school type, subject, achievement and gender on the variable of performance.

ANOVA TABLE 1

Main and interaction effects of school type, subject, achievement and gender on performance.

Source of variation	Performance			
	M.S.S.	df	F	P
School Type (ST)	6076.62	1,194	79.68	0.01**
Subject (S)	6105.47	1,194	25.60	0.01**
Achievement (A)	4812.31	1,194	13.72	0.01**
Gender (G)	13.60	1,194	1.02	N.S.
ST x S	1026.04	1,192	52.29	0.01**
ST x A	75.02	1,192	3.82	N.S.
ST x G	3.38	1,192	0.17	N.S.
S x A	477.28	1,192	24.32	0.01**
S x G	7.49	1,192	0.38	N.S.
A x G	1.22	1,192	0.06	N.S.
ST x S x A	1.51	1,190	0.07	N.S.
ST x S x G	38.92	1,190	1.97	N.S.
ST x A x G	5.38	1,190	0.27	N.S.
S x A x G	44.36	1,190	2.26	N.S.
ST x S x A x G	25.68	1,188	1.30	N.S.
Residual	3531.85	180		
Total	29399.06	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 1(a) shows the related mean scores and standard deviations.

TABLE 1(a)

Mean and S.D. for various groups on Performance

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	84.09	8.33
2.	School 2 (N=56)	69.45	14.25
3.	Science (N=103)	86.04	6.15
4.	Humanities (N=93)	73.05	13.69
5.	High Achiever (N=97)	86.93	7.04
6.	Average Achiever (N=99)	72.97	12.38
7.	Male (N=88)	81.41	11.22
8.	Female (N=108)	78.63	12.99
9.	(School 1 Science (N=73)	88.34	4.69
10.	School 1 Humanities (N=67)	79.39	8.69
11.	School 2 Science (N=30)	80.47	5.80
12.	School 2 Humanities (N=26)	56.73	9.69
13.	Science High Achiever (N=56)	89.68	3.68
14.	Science Average Achiever (N=47)	81.68	5.70
15.	Humanities High Achiever (N=41)	83.15	8.71
16.	Humanities Average Achiever (N=52)	65.10	11.51

It was seen from Table 1 that the main effect of school type on performance was significant. The mean performance of students of School 1 was better (Mean=84.09, S.D.=8.33) than their counterparts in school 2 (Mean=69.45, S.D.=14.25) (Table 1(a)). The obtained difference in performance by school type was statistically significant, $F=79.68$, $p<0.01$, which meant that in 99% cases, students in school 1 should perform better than the students in school 2 (Table 1(a)). The main effect of subject on performance was found statistically significant. The mean performance of science students was better (Mean=86.04, S.D.=6.15) than those in humanities (Mean=73.05, S.D.=13.69) (Table 1(a)). The difference in performance by school type was found statistically significant, $F=25.60$, $p < 0.01$, which meant that in 99% cases students of Science should perform better than students of Humanities (Table 1). The main effect of achievement on performance was found significant.

The mean performance of high achievers was better (Mean=86.93, S.D.=7.04) than the average achievers (Mean = 72.97, S.D. = 12.38) (Table 1(a)). The difference in performance by achievement was statistically significant, $F=13.72$, $p < 0.01$ which meant that in 99% cases high achievers should perform better than average achievers (Table 1). The main effect of gender on performance was not found statistically insignificant. The F value was 1.02. The mean performance of male students was little higher (Mean = 81.41, S.D. = 11.22) than the female students (Mean = 78.63, S.D. = 12.99), (Table 1(a)).

The interaction effect of school type and subject on performance was statistically significant (Table 1). The mean performance of science students in school 1 was better (Mean = 88.34, S. D. = 4.69) from their counterparts in school 2 (Mean = 80.47, S. D. = 5.80) (Table 1(a)). The mean performance of students in humanities in school 1 was also better (Mean = 79.39, S. D. = 8.96) than their counterparts in school 2 (Mean = 56.73, S. D. = 9.69) (Table 1(a)). The difference was statistically significant $F = 52.29$, $p < 0.01$, which meant that in 99% cases, science and humanities students in school 1 should perform better than their counterparts in school 2 (Table 1).

No other interaction effects on performance were found statistically significant (Table 1). The F value of subject type and achievement on performance was 3.82, of school type and gender $F= 0.17$. The F value for subject and gender was 0.38, of achievement and gender $F = 0.06$, F value for school type x subject x achievement was 0.07, F value for school type x achievement x gender was 0.27 (Table 1). The interaction effect of subject, achievement and gender was found statistically insignificant. The F value was 2.26. The interaction effect of school type, subject, achievement and gender was also not significant. The F value was 1.30.

Self Esteem

Table 2 shows the main and interaction effects of school type, subject, achievement and gender on self-esteem.

ANOVA TABLE 2

Main and interaction effects of school type, subject, achievement and gender on self-esteem.

Source of variation	Self-Esteem			
	M.S.S.	df	F	P
School Type (ST)	54.32	1,194	4.46	0.05*
Subject (S)	14.75	1,194	1.21	N.S.
Achievement (A)	8.04	1,194	0.66	N.S.
Gender (G)	16.70	1,194	1.37	N.S.
ST x S	193.91	1,192	15.94	0.01**
ST X A	8.05	1,192	0.66	N.S.
ST x G	19.88	1,192	1.63	N.S.
S x A	0.03	1,192	0.00	N.S.
S x G	2.34	1,192	0.91	N.S.
A x G	12.48	1,192	1.02	N.S.
ST x S x A	22.29	1,190	1.83	N.S.
ST x S x G	4.36	1,190	0.35	N.S.
ST x A x G	19.94	1,190	1.64	N.S.
S x A x G	10.09	1,190	0.83	N.S.
ST x S x A x G	7.71	1,188	0.63	N.S.
Residual	2188.96	180		
Total	2573.15	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 2(a) shows the related mean scores and standard deviations.

TABLE 2(a)
Mean and S.D. for various groups on Self-Esteem

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	22.72	3.41
2.	School 2 (N=56)	21.48	3.53
3.	Science (N=103)	22.25	3.56
4.	Humanities (N=93)	22.50	3.74
5.	High Achiever (N=97)	22.29	3.65
6.	Average Achiever (N=99)	22.44	3.66
7.	Male (N=88)	22.85	3.47
8.	Female (N=108)	22.03	3.73
9.	(School 1 Science (N=73)	22.03	3.39
10.	School 1 Humanities (N=67)	23.49	3.60
11.	School 2 Science (N=30)	22.80	3.96
12.	School 2 Humanities (N=26)	19.96	2.92

The main effect of school type on self-esteem was significant (Table 2). The F value was 4.46. The mean score on self-esteem of students of school 1 was little higher (Mean = 22.72, S. D. = 3.41) than the mean self-esteem of students of school 2 (Mean = 21.48, S. D. = 3.53) (Table 2(a)). The obtained difference in self esteem by school type was statistically significant ($F = 4.46$, $p < .05$) which meant that in 95% cases students in school 1 should have higher self esteem than students in school 2.

The main effect of subject on self-esteem was insignificant (Table 2). The F value was 1.21. The mean score on self-esteem of students of humanities was not much higher (Mean = 22.50, S.D. = 3.74) than the mean self-esteem of students of science (Mean = 22.25, S.D. = 3.8) (Table 2(a)). The main effect of achievement on self-esteem was insignificant. The F value was 0.66. The mean self-esteem of average achievers was comparable (Mean = 22.44, S.D. = 3.66) to the self-esteem of the high achievers (Mean = 22.29, S.D. = 3.65) (Table 2(a)). Table 2 showed that the main effect of gender on self-esteem were insignificant. F value was 1.37. The mean score of male students was comparable (Mean = 22.85, S. D. = 3.47) than the mean self-esteem of female students (Mean = 22.03, S. D. = 3.73) (Table 2(a)).

Most of the interaction effects among school type, subject, achievement and gender on self-esteem were not significant (Table 2). Only the interaction effect of school type and subject was statistically significant. The mean on self-esteem of science students in school 2 was little higher (Mean = 22.80, S.D. = 3.96) (Table 2(a)) than the mean self-esteem of science students in school 1 (Mean=22.03, S.D.=3.39) (Table 2(a)), but the mean self-esteem of students of humanities in school 1 was much higher (Mean=23.49, S.D.= 3.60) (Table 2(a)) than their counterparts in school 2 (Mean=19.96, S.D.=2.92) (Table 2(a)). The difference was found statistically significant, $F=15.94$, $p<0.01$, which meant that in 99% cases, students of science in school 2 and students of humanities in school 1 should have higher self-esteem than students of science in school 1 and students in humanities in school 2 (Table 2).

The interaction effect of school type and gender on self-esteem was not statistically significant, The F value was 1.63 (Table 2), The F value for school type and achievement was 0.66, F value for subject and achievement was 0.00. F value for subject and gender was 0.91. The interaction effect of achievement and gender on self-esteem was not significant. The F value was 1.02. The interaction effect of school type, subject and achievement was not significant. The F value was 1.83. The F value for school type x subject x gender was 0.35. F value for subject x achievement x gender was 0.83. The F value for school type x subject x achievement x gender was 0.63. The interaction effects of school type, achievement and gender was not significant. The F value was 1.64 (Table 2).

Social Comparison

Table 3 shows the main and interaction effects of school type, subject, achievement and gender on the social comparison.

ANOVA TABLE 3

Main and interaction effects of school type, subject, achievement and gender on social comparison.

Source of variation	Social Comparison			
	M.S.S.	df	F	P
School Type (ST)	1212.24	1,194	57.87	0.01**
Subject (S)	1478.28	1,194	70.57	0.01**
Achievement (A)	24.72	1,194	1.18	N.S.
Gender (G)	8.00	1,194	0.38	N.S.
ST x S	1380.70	1,192	65.91	0.01**
ST X A	1.27	1,192	0.06	N.S.
ST x G	0.39	1,192	0.01	N.S.
S x A	3.45	1,192	0.16	N.S.
S x G	31.45	1,192	1.50	N.S.
A x G	59.11	1,192	2.82	N.S.
ST x S x A	0.44	1,190	0.02	N.S.
ST x S x G	11.23	1,190	0.53	N.S.
ST x A x G	0.89	1,190	0.04	N.S.
S x A x G	0.09	1,190	0.01	N.S.
ST x S x A x G	1.86	1,188	0.08	N.S.
Residual	3770.48	180		
Total	7723.44	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 3(a) shows the related mean scores and standard deviations.

TABLE 3(a)

Mean and S.D. for various groups on Social Comparison

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	31.25	4.86
2.	School 2 (N=56)	25.57	7.54
3.	Science (N=103)	31.33	4.62
4.	Humanities (N=93)	27.74	7.31
5.	High Achiever (N=97)	30.61	5.53
6.	Average Achiever (N=99)	28.67	6.84
7.	Male (N=88)	29.88	6.45
8.	Female (N=108)	29.49	6.18
9.	(School 1 Science (N=73)	31.16	4.85
10.	School 1 Humanities (N=67)	31.36	4.94
11.	School 2 Science (N=30)	31.77	4.03
12.	School 2 Humanities (N=26)	18.42	2.66

It was seen from Table 3 that the main effect of school type on social comparison was significant. The mean score on social comparison orientation of students in school 1 was higher (Mean=31.25, S.D.=4.86) than the mean score of students of school 2 (Mean=25.57, S.D.=7.54) (Table 3(a)). The difference in scores was statistically significant, $F=57.87$, $p<0.01$, which meant that in 99% cases, students in school 1 should use social comparison processes more often than their counterparts in school 2 (Table 3). The main effect of subject on social comparison was significant. The mean score of students of science was better (Mean=31.33, S.D.= 4.62) than the students of humanities (Mean=27.74, S.D.=7.31) (Table 3(a)). The obtained difference was statistically significant, $F=70.57$, $p<0.01$, which meant that in 99% cases, students of science used better social comparison processes than the students of humanities (Table 3). The main effect of achievement on social comparison was not statistically significant. The F value was 1.18. The mean of high achievers was little higher (Mean=30.61, S.D.=5.53) than the average

achievers (Mean=28.67, S.D.=6.84) (Table 3(a)). The main effect of gender on social comparison orientation was not statistically significant. The F value was 0.38. The mean score of male students was comparable (Mean=29.88, S.D.=6.45) to the female students (Mean=29.49, S.D.=6.18) (Table 3(a)).

The interaction effect of school type and subject was found statistically significant. The mean of science students in school 2 was higher (Mean=31.77, S.D.=4.03) than their counterparts in school 1 (Mean=31.16, S.D.=4.85) (Table 3(a)). The mean score on social comparison of students of humanities in school 1 was higher (Mean=31.36, S.D.=4.94) (Table 3(a)) than their counterparts in school 2 (Mean=18.42, S.D. =2.66) (Table 3(a)). The obtained difference was statistically significant, $F=65.91$, $p<0.01$, which meant that in 99% cases, students of science in school 1 used frequently social comparison processes than their counterparts in school 2, and the humanities students in school 2 used social comparison process more often than their counterparts in school 1. The F value for interaction effect by school type x achievement was 0.06. F value for school type x gender was 0.01. F value for subject x achievement was 0.16. The F value for subject and gender was 1.50. The F value for achievement x gender was 2.82 and for school type x subject x achievement 0.02. F value for school type x achievement x gender was 0.53 and for school type x achievement x gender 0.04. F value for subject x achievement x gender was 0.01. The F value for school type x subject x achievement x gender was 0.08 (Table 3). The F values showed that the differences were not significant.

Empathy

Table 4 shows the main and interaction effects of school type, subject, achievement and gender on empathy.

ANOVA TABLE 4

Main and interaction effects of school type, subject, achievement and gender on empathy.

Source of variation	Empathy			
	M.S.S.	Df	F	P
School Type (ST)	1.42	1,194	1.35	N.S.
Subject (S)	0.21	1,194	0.20	N.S.
Achievement (A)	0.05	1,194	0.04	N.S.
Gender (G)	0.05	1,194	0.05	N.S.
ST x S	0.34	1,192	0.32	N.S.
ST x A	0.01	1,192	0.01	N.S.
ST x G	0.11	1,192	0.11	N.S.
S x A	0.00	1,192	0.00	N.S.
S x G	0.14	1,192	0.13	N.S.
A x G	1.08	1,192	1.03	N.S.
ST x S x A	1.81	1,190	1.72	N.S.
ST x S x G	1.85	1,190	1.76	N.S.
ST x A x G	3.47	1,190	3.29	N.S.
S x A x G	0.80	1,190	0.80	N.S.
ST x S x A x G	1.71	1,188	1.63	N.S.
Residual	189.88	180		
Total	206.30	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 4(a) shows the related mean scores and standard deviations.

TABLE 4(a)

Mean and S.D. for various groups on Empathy

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	8.23	1.00
2.	School 2 (N=56)	7.84	1.04
3.	Science (N=103)	8.09	1.05
4.	Humanities (N=93)	8.15	1.00
5.	High Achiever (N=97)	8.21	1.02
6.	Average Achiever (N=99)	8.11	1.04
7.	Male (N=88)	8.07	1.10
8.	Female (N=108)	8.16	0.97

It was seen from Table 4 that the main effects of school type, subject, achievement and gender on empathy were not statistically significant. The mean on empathy of all students of school 1 was comparable (Mean=8.23, S.D.=1.00) to the students of school 2 (Mean=7.84, S.D.=1.04) (Table 4(a)). The mean of students of humanities was comparable (Mean=8.15, S.D.=1.00) to the students of science (Mean=8.09, S.D. = 1.05) (Table 4(a)). The mean of high achievers was comparable (Mean = 8.21, S.D. = 1.02) to the average achievers (Mean = 8.11, S.D. = 1.04) (Table 4(a)). The mean of female students was comparable (Mean = 8.16, S.D. = 0.97) to the male students (Mean = 8.07, S.D. = 1.10) (Table 4(a)).

None of the interaction effects were statistically significant (Table 4). The F value for the interaction effect of achievement and gender was 1.03. The F value for school type x subject x achievement was 1.72. The F value for interaction effect of school type, subject and gender was 1.76. The F value for interaction effect of school type, achievement and gender was 3.29. The F value for interaction effect of school type, subject, achievement and gender on empathy was 1.63. The F value for interaction effect of school type x subject was 0.32. F value for school type x achievement was 0.01. F value for school type x gender was 0.11. F value for subject x achievement was 0.00. F value for subject x gender was 0.13. The F value for subject x achievement x gender was 0.80. The F values showed that the differences were not significant.

Ego Ideal

Table 5 shows the main and interaction effects of school type, subject, achievement and gender on ego ideal.

ANOVA TABLE 5

Main and interaction effects of school type, subject, achievement and gender on ego Ideal.

Source of variation	Ego Ideal			
	M.S.S.	df	F	P
School Type (ST)	1.24	1,194	1.37	N.S.
Subject (S)	0.19	1,194	0.22	N.S.
Achievement (A)	0.29	1,194	0.33	N.S.
Gender (G)	2.68	1,194	2.97	N.S.
ST x S	0.80	1,192	0.88	N.S.
ST x A	0.17	1,192	0.19	N.S.
ST x G	0.58	1,192	0.64	N.S.
S x A	0.46	1,192	0.51	N.S.
S x G	2.17	1,192	2.40	N.S.
A x G	1.78	1,192	1.98	N.S.
ST x S x A	0.00	1,190	0.00	N.S.
ST x S x G	1.48	1,190	1.64	N.S.
ST x A x G	1.62	1,190	1.80	N.S.
S x A x G	0.42	1,190	0.47	N.S.
ST x S x A x G	0.76	1,188	0.85	N.S.
Residual	162.20	180		
Total	176.01	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 5(a) shows the related mean scores and standard deviations.

TABLE 5(a)

Mean and S.D. for various groups on Ego Ideal

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	6.21	0.92
2.	School 2 (N=56)	6.13	1.03
3.	Science (N=103)	6.25	0.92
4.	Humanities (N=93)	6.11	0.98
5.	High Achiever (N=97)	6.23	0.99
6.	Average Achiever (N=99)	6.13	0.91
7.	Male (N=88)	6.39	0.98
8.	Female (N=108)	6.03	0.90

It was seen from Table 5 that none of the main effects on ego ideal were statistically significant. The F values were for school type 1.37, for subject 0.22, for achievement 0.33 and for gender 2.97. The mean score of students of school 1 was comparable (Mean = 6.21, S.D. = 0.92) to their counterparts in school 2 (Mean = 6.13, S.D. = 1.03) (Table 5(a)). The mean score of students of science was comparable (Mean = 6.25, S.D. = 0.92) to the students of humanities (Mean = 6.11, S.D. = 0.98) (Table 5(a)). The mean score of high achievers was comparable (Mean = 6.23, S.D. = 0.99) to the average achievers (Mean = 6.13, S.D. = 0.91) (Table 5(a)). The mean score of male students was comparable (Mean = 6.39, S.D. = 0.98) to the female students (Mean = 6.03, S.D. = 0.90) (Table 5(a))

Table 5 showed that none of the interaction effects were statistically significant. The F value for interaction effect of subject and gender was 2.40. The F value for interaction effect of achievement and gender was 1.98. The interaction effect of school type, subject and gender was insignificant. The F value was 1.64. The F value for interaction effect of school type, achievement and gender was 1.80. The F value for school type x subject was 0.88. For school type x achievement F value was 0.19. For school type x gender, F value was 0.64. For subject type x subject x achievement F value was 0.00. F value for subject x achievement x gender was 0.47. The F value for school type x subject x achievement x gender was 0.85. The F values showed that the differences were not significant.

Pessimism

Table 6 shows the main and interaction effects of school type, subject, achievement and gender on pessimism.

ANOVA TABLE 6

Main and interaction effects of school type, subject, achievement and gender on pessimism.

Source of variation	Pessimism			
	M.S.S.	df	F	P
School Type (ST)	5.63	1,194	3.90	0.05**
Subject (S)	12.15	1,194	8.41	0.01**
Achievement (A)	0.91	1,194	0.63	N.S.
Gender (G)	7.07	1,194	4.89	0.05*
ST x S	9.96	1,192	6.90	0.01**
ST x A	1.54	1,192	1.06	N.S.
ST x G	5.40	1,192	3.74	N.S.
S x A	0.85	1,192	0.59	N.S.
S x G	1.52	1,192	1.05	N.S.
A x G	1.55	1,192	1.07	N.S.
ST x S x A	1.05	1,190	0.72	N.S.
ST x S x G	4.30	1,190	2.98	N.S.
ST x A x G	3.64	1,190	2.52	N.S.
S x A x G	0.29	1,190	0.20	N.S.
ST x S x A x G	0.31	1,188	0.22	N.S.
Residual	260.00	180		
Total	310.38	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 6(a) shows the related mean scores and standard deviations.

TABLE 6(a)**Mean and S.D. for various groups on Pessimism**

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	6.27	1.20
2.	School 2 (N=56)	6.88	1.31
3.	Science (N=103)	6.32	1.27
4.	Humanities (N=93)	6.58	1.24
5.	High Achiever (N=97)	6.21	1.20
6.	Average Achiever (N=99)	6.67	1.28
7.	Male (N=88)	6.61	1.24
8.	Female (N=108)	6.31	1.27
9.	(School 1 Science (N=73)	6.23	1.23
10.	School 1 Humanities (N=67)	6.31	1.17
11.	School 2 Science (N=30)	6.53	1.36
12.	School 2 Humanities (N=26)	7.27	1.15

Table 6 showed that few of the main effects of pessimism were significant. The F value for school type was 3.90, for subject type F was 8.41, for achievement, the F value was 0.63 and for gender, F was 4.89. The mean score of students in school 2 was higher (Mean = 6.88, S.D. = 1.31) than the students in school 1 (Mean = 6.27, S.D. = 1.20) (Table 6(a)). The difference by school type was significant, $F = 3.90$, $p < 0.05$, which meant that in 95% cases, the students in school 2 could be more pessimistic than those in school 1 (Table 6). The mean score of students of Humanities was little higher (Mean = 6.58, S.D. = 1.24) than students of Science (Mean = 6.32, S.D. = 1.24) (Table 6(a)). The difference by subject was found to be significant, $F = 8.41$, $p < 0.01$, which meant that in 99% cases, the students of Humanities could be more pessimistic than the students of science. The main effect of achievement on pessimism was significant. The mean of average achievers was little higher (Mean = 6.67, S.D. = 1.28) than the high achievers (Mean = 6.21, S.D. = 1.20). The mean of male students was little higher (Mean = 6.61, S.D. = 1.24) than the female students (Mean = 6.31, S.D. = 1.27) (Table 6(a)). The difference by gender was significant, $F = 4.89$, $p < 0.05$ (Table 6) which meant that in 95% cases, the male students could be more pessimistic than female students.

The interaction effect of only school type and subject was significant (Table 6). The mean score of science students in school 2 was higher (Mean = 6.53, S.D. = 1.36) than their counterparts in School 1 (Mean = 6.23, S.D. = 1.23) (Table 6(a)). The mean score of students of Humanities in school 2 was higher (Mean = 7.27, S.D. = 1.15) than their counterparts in School 1 (Mean = 6.31, S.D. = 1.17) (Table 6(a)). The difference was significant, $F = 6.90$, $p < 0.01$, which meant that in 99% cases students of Science and Humanities in School 2 could be more pessimistic than those in school 1. The interaction effect of school type and achievement on pessimism was not significant. The F value was 1.06. The interaction effect of school type and gender was not statistically significant. The F value was 3.74. The interaction effect of subject

and gender was not significant. The F value was 1.05. The interaction effect of achievement and gender on pessimism was not statistically significant. The F value was 1.07. The interaction effect of school type, achievement and gender was not statistically significant. The F value was 2.98. The interaction effect by school type, achievement and gender was not statistically significant. The F value was 2.52. The interaction effect by subject x achievement was not significant, F value was 0.59. The F value for school type x subject x achievement was 0.72. The F value of subject x achievement x gender was 0.20. The F value for school type x subject x achievement x gender was 0.22 (Table 6).

Introversion

Table 7 shows the main and interaction effects of school type, subject, achievement and gender on introversion.

ANOVA TABLE 7

Main and interaction effect of school type, subject, achievement and gender on introversion.

Source of variation	Introversion			
	M.S.S.	df	F	P
School Type (ST)	3.92	1,194	2.73	N.S.
Subject (S)	0.01	1,194	0.01	N.S.
Achievement (A)	1.21	1,194	0.84	N.S.
Gender (G)	1.91	1,194	0.83	N.S.
ST x S	0.49	1,192	0.34	N.S.
ST X A	0.07	1,192	0.04	N.S.
ST x G	0.03	1,192	0.03	N.S.
S x A	0.03	1,192	0.02	N.S.
S x G	0.65	1,192	0.45	N.S.
A x G	0.01	1,192	0.00	N.S.
ST x S x A	0.01	1,190	0.00	N.S.
ST x S x G	0.37	1,190	0.26	N.S.
ST x A x G	0.03	1,190	0.02	N.S.
S x A x G	3.89	1,190	2.71	N.S.
ST x S x A x G	0.15	1,188	0.10	N.S.
Residual	258.50	180		
Total	271.25	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 7(a) shows the related mean scores and standard deviations.

TABLE 7(a)

Mean and S.D. for various groups on Introversion

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	8.94	1.16
2.	School 2 (N=56)	8.66	1.21
3.	Science (N=103)	8.90	1.20
4.	Humanities (N=93)	8.82	1.15
5.	High Achiever (N=97)	8.83	1.18
6.	Average Achiever (N=99)	8.90	1.18
7.	Male (N=88)	8.99	1.18
8.	Female (N=108)	8.76	1.18

Table 7 shows the main and interaction effects of school type, subject, achievement and gender on Personality variables of introversion. Table 7(a) shows the related mean scores and standard deviations.

Table 7 showed that none of the main effects on Introversion were statistically significant. The F value by school type was 2.73. The F value by subject was 0.01. The F value by achievement was 0.84 and by gender, 0.83. It indicated that students of School 1 and School 2, males and females, science and humanities students, high and average achievers did not differ significantly on introversion. The mean score of students of school 1 on introversion was comparable (Mean = 8.94, S.D. = 1.16) to their counterparts in school 2 (Mean = 8.66, S.D. = 1.21). The mean score of science students was comparable (Mean = 8.90, S.D. = 1.20) to the students of humanities (Mean = 8.82, S.D. = 1.15). The mean of average achievers was close (Mean = 8.90, S.D. = 1.18) to the high achievers (Mean = 8.83, S.D. = 1.18). The mean of male students was close (Mean = 8.99, S.D. = 1.18) to the female students (Mean = 8.76, S.D. = 1.18) (Table 7(a)).

None of the interaction effects on introversion were found significant (Table 7). The F value of the interaction effect of subject, achievement and gender was 2.71. F value for school type and subject was 0.34, F value for school type and achievement was 0.04, F value for school type and gender was 0.03, of subject and achievement was 0.02. The F value for subject and gender was 0.45. The F value of interaction effect of achievement and gender was 0.00, of school type x subject x achievement was 0.00, of school type x subject x gender F value was 0.26, of school type, achievement and gender was 0.02, of school type x subject x achievement x gender was 0.10, which indicated that the differences were not significant.

Neuroticism

Table 8 shows the main and interaction effects of school type, subject, achievement and gender on neuroticism.

ANOVA TABLE 8

Main and interaction effect of school type, subject, achievement and gender on neuroticism.

SOURCE OF VARIATION	NEUROTICISM			
	M.S.S.	df	F	P
School Type (ST)	7.49	1,194	4.23	0.05*
Subject (S)	9.60	1,194	5.43	0.05*
Achievement (A)	0.65	1,194	0.37	N.S.
Gender (G)	1.29	1,194	0.73	N.S.
ST x S	0.64	1,192	0.39	N.S.
ST x A	0.01	1,192	0.01	N.S.
ST x G	0.95	1,192	0.54	N.S.
S x A	1.09	1,192	0.62	N.S.
S x G	0.41	1,192	0.23	N.S.
A x G	3.89	1,192	2.20	N.S.
ST x S x A	0.02	1,190	0.01	N.S.
ST x S x G	0.81	1,190	0.46	N.S.
ST x A x G	0.14	1,190	0.08	N.S.
S x A x G	2.61	1,190	1.47	N.S.
ST x S x A x G	0.53	1,188	0.30	N.S.
Residual	318.43	180		
Total	349.38	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 8(a) shows the related mean scores and standard deviations.

TABLE 8(a)

Mean and S.D. for various groups on Neuroticism

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	11.05	1.35
2.	School 2 (N=56)	11.50	1.25
3.	Science (N=103)	10.93	1.39
4.	Humanities (N=93)	11.45	1.23
5.	High Achiever (N=97)	11.11	1.42
6.	Average Achiever (N=99)	11.24	1.25
7.	Male (N=88)	11.19	1.30
8.	Female (N=108)	11.18	1.37

Table 8 showed that not all the main effect on neuroticism was significant. The F value for school type was 4.23, F value for subject was 5.43, F value for achievement was 0.37 and for gender 0.73. The main effect of school type on neuroticism was significant. The mean of students in school 2 was somewhat higher (Mean = 11.50, S.D. = 1.25) than the students of school 1 (Mean = 11.05, S.D. = 1.35) (Table 8(a)). The obtained difference was statistically significant, $F = 4.23$, $p < 0.05$ which meant that in 95% cases students in school 2 could have more neurotic tendencies than students in school 1. The main effect of subject was significant. The mean of students of humanities was higher (Mean = 11.45, S.D. = 1.23) than the students of science (Mean = 10.93, S.D. = 1.39) (Table 8(a)). The difference was significant, $F = 5.43$, $p < 0.05$ which meant that in 95% cases students of humanities could have more neurotic tendencies than students of science. The main effect of achievement was not significant. The mean score of average achievers was comparable (Mean = 11.24, S.D. = 1.25) to the high achievers (Mean = 11.11, S.D. = 1.42) (Table 8(a)). The mean for male students was same (Mean = 11.19, S.D. = 1.30) as the females (Mean = 11.18, S.D. = 1.37) (Table 8(a)).

None of the interaction effects on neuroticism were not significant (Table 8). The F value for the interaction effect of achievement and gender on Neuroticism was 2.20. The F value for interaction effect of subject, achievement and gender was 1.47. F value for school type and subject was 0.39. For school type x achievement was 0.01, for school type and gender F value was 0.54, for subject and achievement F value was 0.62, for subject and gender F value was 0.23, for school type, subject and achievement F value was 0.01, for school type, subject and gender F value was 0.46, for school type, achievement and gender F value was 0.08, for school type, subject, achievement and gender F value was 0.30. The F values showed that the differences were not significant.

Need Achievement

Table 9 shows the main and interaction effects of school type, subject, achievement and gender on need achievement.

ANOVA TABLE 9

Main and interaction effect of school type, subject, achievement and gender on need achievement.

Source of variation	Need Achievement			
	M.S.S.	Df	F	P
School Type (ST)	3.15	1,194	2.24	N.S.
Subject (S)	14.33	1,194	10.21	0.01**
Achievement (A)	7.69	1,194	5.48	0.05*
Gender (G)	0.01	1,194	0.00	N.S.
ST x S	0.14	1,192	0.10	N.S.
ST x A	0.04	1,192	0.03	N.S.
ST x G	0.49	1,192	0.35	N.S.
S x A	1.07	1,192	0.76	N.S.
S x G	0.00	1,192	0.00	N.S.
A x G	0.00	1,192	0.00	N.S.
ST x S x A	0.07	1,190	0.05	N.S.
ST x S x G	0.00	1,190	0.00	N.S.
ST x A x G	0.00	1,190	0.00	N.S.
S x A x G	0.97	1,190	0.69	N.S.
ST x S x A x G	1.24	1,188	0.88	N.S.
Residual	252.59	180	1.40	
Total	302.34	195	1.55	

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 9(a) shows the related mean scores and standard deviations.

TABLE 9(a)

Mean and S.D. for various groups on Need Achievement

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	7.84	1.31
2.	School 2 (N=56)	8.09	1.03
3.	Science (N=103)	8.27	1.22
4.	Humanities (N=93)	7.51	1.14
5.	High Achiever (N=97)	8.20	1.27
6.	Average Achiever (N=99)	7.62	1.15
7.	Male (N=88)	8.05	1.16
8.	Female (N=108)	7.80	1.30

Table 9 showed that some of the main effects on need achievement were significant. The F value for school type was 2.24, for subject 10.21, for achievement 5.48 and for gender F value was 0.00.

The mean score of school 2 was not much higher (Mean = 8.09, S.D. = 1.03) than the students of school 1 (Mean = 7.84, S.D. = 1.31) (Table 9(a)). The mean of science students was higher (Mean = 8.27, S.D. = 1.22) than the humanities students (Mean = 7.51, S.D. = 1.14) (Table 9(a)). The difference by subject was significant, $F = 10.21$, $p < 0.01$ which meant that in 99% cases science students should show higher need achievement than the humanities students. The mean score of high achievers was higher (Mean = 8.20, S.D. = 1.27) than the average achievers (Mean = 7.62, S.D. = 1.15) (Table 9(a)). The difference by achievement was significant, $F = 5.48$, $p < 0.05$ which meant that in 95% cases high achievers should show higher need achievement than average achievers. The mean of male students was close (Mean = 8.05, S.D. = 1.16) to the female students (Mean = 7.80, S.D. = 1.30) (Table 9(a)).

None of the interaction effects on need achievement were significant (Table 9). The F value for interaction effect of school type and subject was 0.10, for

school type and achievement F value was 0.03, for school type and gender F value was 0.35, for subject and achievement F value was 0.76, for subject and gender F value was 0.00, for achievement and gender F value was 0.00, for school type, subject and achievement F value was 0.05, for school type, achievement and gender F value was 0.00, for school type, subject and achievement F value was 0.00, for subject, achievement and gender F value was 0.69, for school type, subject, achievement and gender F value was 0.88. The F values showed that the differences were not significant.

Self Confidence

Table 10 shows the main and interaction effects of school type, subject, achievement and gender on self-confidence.

ANOVA TABLE 10

Main and interaction effects of school type, subject, achievement and gender on self confidence

Source of variation	Self-Confidence			
	M.S.S.	Df	F	P
School Type (ST)	1.30	1,194	1.08	N.S.
Subject (S)	0.33	1,194	0.27	N.S.
Achievement (A)	0.63	1,194	0.57	N.S.
Gender (G)	7.38	1,194	6.15	0.05*
ST x S	0.00	1,192	0.00	N.S.
ST x A	0.88	1,192	0.73	N.S.
ST x G	2.44	1,192	2.03	N.S.
S x A	0.30	1,192	0.25	N.S.
S x G	0.28	1,192	0.23	N.S.
A x G	0.15	1,192	0.12	N.S.
ST x S x A	0.20	1,190	0.17	N.S.
ST x S x G	0.00	1,190	0.00	N.S.
ST x A x G	0.20	1,190	0.16	N.S.
S x A x G	0.66	1,190	0.55	N.S.
ST x S x A x G	0.52	1,188	0.43	N.S.
Residual	215.85	180		
Total	235.56	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 10(a) shows the related mean scores and standard deviations.

TABLE 10(a)

Mean and S.D. for various groups on Self-Confidence

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	7.66	1.13
2.	School 2 (N=56)	7.86	1.00
3.	Science (N=103)	7.85	1.09
4.	Humanities (N=93)	7.57	1.10
5.	High Achiever (N=97)	7.71	1.20
6.	Average Achiever (N=99)	7.72	0.99
7.	Male (N=88)	7.93	1.04
8.	Female (N=108)	7.55	1.12

It was seen in Table 10 that not all the main effect on self-confidence were significant. The F value for school type was 1.08, for subject F value was 0.27, for achievement F value was 0.57 and for gender F value was 6.15 which was only significant. The mean score on self-confidence of students of school 2 was comparable (Mean = 7.86, S.D. = 1.00) to the students of school 1 (Mean = 7.66, S.D. = 1.13) (Table 10(a)). The mean score on self-confidence of students of science was comparable (Mean = 7.86, S.D. = 1.00) to the students of humanities (Mean = 7.57, S.D. = 1.10) (Table 10(a)). The mean on self-confidence of average achiever was comparable (Mean = 7.72, S.D. = 0.99) to the high achievers (Mean = 7.71, S.D. = 1.20) (Table 10(a)). The main effect of gender on self-confidence was significant. The mean score of males was slightly higher (Mean = 7.93, S.D. = 1.04) than the female (Mean = 7.55, S.D. = 1.12) (Table 10(a)). The differences by gender was statistically significant, $F = 6.15$, $p < 0.05$ (Table 10), which meant that in 95% cases, the male students could have more self confidence than the female students.

None of the interaction effect on self-confidence was found to be significant (Table 10). The F value of school type and gender was 2.03, the F value for

school type and subject was 0.00, for school type and achievement F value was 0.73, for subject and achievement F value was 0.25, for subject and gender F value was 0.23, for achievement and gender F value was 0.12, for school type, subject and achievement F value was 0.17, for school type, subject and gender F value was 0.00, for school type, achievement and gender F value was 0.16, for subject x achievement x gender F value was 0.55, for school type x subject x achievement x gender F value was 0.43. The F value showed that the differences were not significant.

Dogmatism

Table 11 shows the main and interaction effects of school type, subject, achievement and gender on dogmatism.

ANOVA TABLE 11

Main and interaction effects of school type, subject, achievement and gender on dogmatism .

Source of variation	Dogmatism			
	M.S.S.	df	F	P
School Type (ST)	0.14	1,194	0.24	N.S.
Subject (S)	2.11	1,194	3.45	N.S.
Achievement (A)	0.60	1,194	0.98	N.S.
Gender (G)	0.06	1,194	0.09	N.S.
ST x S	1.13	1,192	1.85	N.S.
ST X A	1.34	1,192	2.19	N.S.
ST x G	0.08	1,192	0.14	N.S.
S x A	0.09	1,192	0.15	N.S.
S x G	0.04	1,192	0.07	N.S.
A x G	0.46	1,192	0.76	N.S.
ST x S x A	2.19	1,190	3.57	N.S.
ST x S x G	0.11	1,190	0.18	N.S.
ST x A x G	0.02	1,190	0.04	N.S.
S x A x G	0.55	1,190	0.89	N.S.
ST x S x A x G	0.07	1,188	0.11	N.S.
Residual	110.39	180		
Total	122.75	195		

** = $p < 0.01$, * = $p < 0.05$, N.S. = Not significant

Table 11(a) shows the related mean scores and standard deviations.

TABLE 11(a)

Mean and S.D. for various groups on Dogmatism

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	4.60	0.82
2.	School 2 (N=56)	4.59	0.76
3.	Science (N=103)	4.72	0.72
4.	Humanities (N=93)	4.46	0.87
5.	High Achiever (N=97)	4.56	0.81
6.	Average Achiever (N=99)	4.64	0.79
7.	Male (N=88)	4.65	0.80
8.	Female (N=108)	4.57	0.79

Table 11 showed that none of the main and interaction effects on dogmatism were significant. It indicated that students of school 1 and school 2, students of science and humanities, high and average achievers, male and female students did not differ significantly on dogmatism. The F value for school type was 0.24, for subject 3.45, for achievement 0.98 and for gender 0.09. The mean of students of school 1 on dogmatism was comparable (Mean = 4.60, S.D. = 0.82) to the students of school 2 (Mean = 4.59, S.D. = 0.76) (Table 11(a)). The mean of students of science was comparable (Mean = 4.72, S.D. = 0.72) to the students of humanities (Mean = 4.46, S.D. = 0.87) (Table 11(a)). The mean of average achievers was comparable (Mean = 4.64, S.D. = 0.79) to the high achievers (Mean = 4.56, S.D. = 0.81) (Table 11(a)). Mean score of males was comparable (Mean = 4.67, S.D. = 0.80) to the females (Mean = 4.57, S.D. = 0.79) (Table 11(a)).

The interaction effect of school type and subject was not significant (Table 11). The F value was 1.85, the F value for school type and achievement was 2.19, the F value for school type and achievement 0.14, F value for subject and achievement 0.15, F value for subject and gender 0.07, for achievement

and gender F value was 0.76. The F value for school type, subject and achievement 3.57. The F value for school type x subject x gender was 0.18, F value for school type x achievement and gender was 0.04, for subject, achievement and gender F value was 0.89, for school type x subject x achievement x F value was gender 0.11. The F value showed that the differences were not significant.

Dominance

Table 12 shows the main and interaction effects of school type, subject, achievement and gender on dominance.

ANOVA TABLE 12

Main and interaction effects of school type, subject, achievement and gender on dominance.

Source of variation	Dominance			
	M.S.S.	Df	F	P
School Type (ST)	0.44	1,194	0.28	N.S.
Subject (S)	1.73	1,194	1.13	N.S.
Achievement (A)	0.06	1,194	0.04	N.S.
Gender (G)	7.16	1,194	4.67	0.05**
ST x S	0.01	1,192	0.01	N.S.
ST X A	0.28	1,192	0.18	N.S.
ST x G	0.00	1,192	0.00	N.S.
S x A	0.75	1,192	0.49	N.S.
S x G	0.81	1,192	0.53	N.S.
A x G	0.92	1,192	0.60	N.S.
ST x S x A	0.05	1,190	0.03	N.S.
ST x S x G	1.00	1,190	0.65	N.S.
ST x A x G	1.30	1,190	0.85	N.S.
S x A x G	1.20	1,190	0.78	N.S.
ST x S x A x G	0.18	1,188	0.12	N.S.
Residual	275.81	180		
Total	295.55	195		

** = $p < 0.01$, * = $p < 0.05$, N.S. = Not significant

Table 12(a) shows the related mean scores and standard deviations.

TABLE 12(a)

Mean and S.D. for various groups on Dominance

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	8.32	1.19
2.	School 2 (N=56)	8.46	1.35
3.	Science (N=103)	8.39	1.28
4.	Humanities (N=93)	8.32	1.18
5.	High Achiever (N=97)	8.35	1.22
6.	Average Achiever (N=99)	8.37	1.25
7.	Male (N=88)	8.16	1.33
8.	Female (N=108)	8.54	1.12

Table 12 showed that not all of the main effect on dominance was statistically significant. The F value for school type was 0.28, for subject F value was 1.13, for achievement F value was 0.04 and for gender F value was 4.67. The mean of students of school 2 was comparable (Mean=8.46, S.D.=1.35) to the students of school 1 (Mean = 8.32, S.D.=1.19) (Table 12(a)). The mean of students of science was comparable (Mean=8.39, S.D.=1.28) to the students of humanities (Mean = 8.32, S.D.=1.18) (Table 12(a)). The mean of average achievers was comparable (Mean=8.37, S.D.=1.25) to the high achievers (Mean=8.35, S.D. = 1.22) (Table 12(a)). The mean of females was comparable (Mean = 8.54, S.D.=1.12) to the males (Mean=8.16, S.D.=1.33) (Table 12(a)). The difference by gender was significant, $F=4.67$, $p<0.05$ which meant that in 95% cases females could be more dominant than males.

None of the interaction effects on dominance were significant (Table 12). The F value for school type and subject was 0.01, for school type and achievement F value was 0.18, for school type and gender F value was 0.00, for subject and achievement F value was 0.49, for achievement and gender F value was 0.53, for achievement and gender F value was 0.60, for school

type x subject x achievement F value was 0.03, for school type x subject x gender F value was 0.65, for school type x achievement x gender F value was 0.85, for subject x achievement x gender 0.78, for school type x subject x achievement x gender F value was 0.12. The F values showed that the differences were not significant.

Intellectual functioning

Table 13 shows the main and interaction effects of school type, subject, achievement and gender on intellectual functioning.

ANOVA TABLE 13

Main and Interaction effects of subject, school type, achievement and gender on intellectual functioning.

Source of variation	Intellectual Functioning			
	M.S.S.	Df	F	P
School Type (ST)	1.56	1,194	1.18	N.S.
Subject (S)	0.09	1,194	0.07	N.S.
Achievement (A)	0.03	1,194	0.02	N.S.
Gender (G)	0.00	1,194	0.00	N.S.
ST x S	0.82	1,194	0.62	N.S.
ST x A	0.01	1,192	0.01	N.S.
ST x G	0.40	1,192	0.30	N.S.
S x A	0.08	1,192	0.06	N.S.
S x G	1.40	1,192	1.06	N.S.
A x G	0.81	1,192	0.62	N.S.
ST x S x A	4.21	1,190	3.20	N.S.
ST x S x G	5.55	1,190	4.21	0.05*
ST x A x G	0.73	1,190	0.22	N.S.
S x A x G	0.00	1,190	0.00	N.S.
ST x S x A x G	3.29	1,188	2.50	N.S.
Residual	236.99	180		
Total	266.41	195		

** = $p < 0.01$, * = $p < 0.05$, N.S. = Not significant

Table 13(a) shows the related mean scores and standard deviations.

TABLE 13(a)

Mean and S.D. for various groups on Intellectual Functioning

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	8.44	1.11
2.	School 2 (N=56)	8.07	1.31
3.	Science (N=103)	8.22	1.22
4.	Humanities (N=93)	8.46	1.12
5.	High Achiever (N=97)	8.30	1.17
6.	Average Achiever (N=99)	8.37	1.19
7.	Male (N=88)	8.30	1.28
8.	Female (N=108)	8.39	1.08
9.	School 1 Science Male (N=41)	8.38	1.03
10.	School 1 Science Female (N=32)	8.21	1.04
11.	School 2 Science Male (N=21)	7.90	1.63
12.	School 2 Science Female (N=9)	8.44	1.08
13.	School 1 Humanities Male (N=17)	8.41	1.30
14.	School 1 Humanities Female (N=50)	8.68	1.04
15.	School 2 Humanities Male (N=9)	8.55	0.88
16.	School 2 Humanities Female (N=17)	7.82	1.10

Table 13 showed that none of the main effects on intellectual functioning were significant. It indicated that the students of school 1 and 2, science and humanities students, high and average achievers, male and female students did not differ significantly on intellectual functioning. The F value for school type was 1.18, for subject 0.07, for achievement 0.02 and for gender 0.00. The mean score of all students of school 1 was nominally higher (Mean = 8.44, S.D.=1.11) than the students of school 2 (Mean = 8.07, S.D.=1.31) (Table 13(a)). The mean score of students of humanities was close (Mean = 8.46, S.D.=1.12) to the students of science (Mean = 8.22, S.D.=1.22) (Table 13(a)). The mean score of average achiever was close (Mean = 8.37, S.D.=1.19) to the high achievers (Mean = 8.30, S.D.=1.17) (Table 13(a)). The

mean score of female students was close (Mean = 8.39, S.D.=1.08) to the male students (Mean = 8.30, S.D. = 1.28) (Table 13(a)).

Most of the interaction effects on intellectual functioning were insignificant (Table 13). The interaction effect of subject and gender was insignificant. The F value was 1.06. F value for school type x subject was 0.62, for school type x achievement 0.01, for school type x gender 0.30, for subject x achievement 0.06, for achievement x gender 0.62. F value for school type x subject x achievement was 3.20.

The interaction effect of school type, subject and gender was significant (Table 13). The mean score of male students having science in school 1 was higher (Mean = 8.38, S.D.=1.03) (Table 13(a)) than their counterparts in school 2 (Mean = 7.90, S.D.=1.63) (Table 13(a)). The mean score of male students of humanities of school 2 was close (Mean = 8.55, S.D.=0.88) (Table 13(a)) to their counterparts in school 1 (Mean = 8.41, S.D.=1.30) (Table 13(a)). The mean score of female students of science in school 2 was higher (Mean = 8.44, S.D.=1.07) (Table 13(a)) than their counterparts in school 1 (Mean = 8.21, S.D. = 1.04) (Table 13(a)). The mean score of female students of humanities in school 1 was higher (Mean = 8.68, S.D. = 1.04) than their counterparts in school 2 (Mean = 7.82, S.D. = 1.1) (Table 13(a)). The difference was significant, $F = 4.21$, $p < 0.05$ (Table 13) which meant that in 95% cases male students of science and female students of humanities in school 1 should have better intellectual functioning than their counterparts in school 2, male students of humanities and female students of science in school 2 should have better intellectual functioning than their counterparts in school 1. The F value for interaction effect of school type x subject x achievement was 3.20, for school type x achievement x gender 0.55, for subject x achievement x gender 0.00, for school type x subject x achievement

x gender 2.50 (Table 13). The F values showed that the differences were not significant.

Socio-Economic Status

Table 13 shows the main and interaction effects of school type, subject, achievement and gender on socio-economic status.

ANOVA TABLE 14

Main and interaction effects of subject, school type, achievement and gender on socio-economic status.

Source of variation	Socio-Economic Status			
	M.S.S.	df	F	P
School Type (ST)	300.60	1,194	60.98	0.01**
Subject (S)	25.18	1,194	5.10	0.05*
Achievement (A)	14.70	1,194	2.98	N.S.
Gender (G)	8.52	1,194	1.73	N.S.
ST x S	21.24	1,192	4.31	0.05*
ST X A	5.52	1,192	1.12	N.S.
ST x G	17.60	1,192	3.57	N.S.
S x A	20.29	1,192	4.11	0.05*
S x G	5.29	1,192	1.07	N.S.
A x G	1.12	1,192	0.22	N.S.
ST x S x A	16.04	1,190	3.25	N.S.
ST x S x G	1.64	1,190	0.33	N.S.
ST x A x G	0.00	1,190	0.00	N.S.
S x A x G	0.00	1,190	0.00	N.S.
ST x S x A x G	1.47	1,188	0.29	N.S.
Residual	887.23	180		
Total	1461.27	195		

** = $p < .01$, * = $p < .05$, N.S. = Not significant

Table 14(a) shows the related mean scores and standard deviations.

TABLE 14(a)

Mean and S.D. for various groups on Socio-Economic Status

S.No.	Group	Mean	S.D.
1.	School 1 (N=196)	11.91	2.14
2.	School 2 (N=56)	8.54	2.59
3.	Science (N=103)	11.26	2.45
4.	Humanities (N=93)	10.61	2.99
5.	High Achiever (N=97)	11.45	2.53
6.	Average Achiever (N=99)	10.46	2.86
7.	Male (N=88)	10.77	2.79
8.	Female (N=108)	11.07	2.70
9.	(School 1 Science (N=73)	12.03	2.03
10.	School 1 Humanities (N=67)	11.79	2.27
11.	School 2 Science (N=30)	9.37	2.46
12.	School 2 Humanities (N=26)	7.58	2.45
13.	Science High Achiever (N=56)	11.37	2.45
14.	Science Average Achiever (N=47)	11.13	2.51
15.	Humanities High Achiever (N=41)	11.56	2.66
16.	Humanities Average Achiever (N=52)	9.87	3.05

Table 14 showed that some of the main effects on socio-economic status were significant. The F value for school type was 60.98, for subject 5.10, for achievement 2.98 for gender 1.73. The main effects of school type was significant (Table 14). The mean score on socio-economic status of students in school 1 was higher (Mean = 11.91, S.D. = 2.14) than the students in school 2 (Mean = 8.54, S.D. = 2.59) (Table 14(a)). The differences were significant, $F = 60.98$, $p < 0.01$, which meant that in 99% cases, students in school 1 had higher socio-economic status than that counterparts in school 2. The main effect of subject was also significant (Table 14). The mean score of science students was higher (Mean = 11.26, S.D. = 2.47) than the students of humanities (Mean = 10.61, S.D. = 2.99) (Table 14(a)). The difference was significant, $F = 5.10$, $p < 0.05$ which meant that in 95% cases students of Science had higher socio-economic status than students of humanities. The mean score of high achievers was little higher (Mean = 11.45, S.D. = 2.53)

than the average achievers (Mean = 10.46, S.D. = 2.86) (Table 14(a)). The mean score of female students was nominally higher (Mean = 11.07, S.D. = 2.74) than the male students (Mean = 10.77, S.D. = 2.79) (Table 14(a)).

Few interaction effects were found statistically significant (Table 14). The interaction of school type and subject was significant. The mean score of science students in school 1 was higher (Mean=12.03, S.D.=2.03) than their counterparts in school 2 (Mean=9.37, S.D.=2.46) (Table 14(a)). The mean score of students of humanities in school 1 was higher (Mean=11.79, S.D. = 2.27) than their counterparts in school 2 (Mean=7.58, S.D.=2.45) (Table 14(a)). The difference was significant, $F = 4.31$, $p < 0.05$ which meant that in 95% cases science students in school 1 had higher socio-economic status than science students in school 2, the students of humanities in school 1 had higher socio-economic status than the students of humanities in school 2.

The F value for school type x achievement was 1.12, for school type x gender F value was 3.57, for subject x gender F value was 1.07, for school type x subject x achievement F value was 3.25. The F value for achievement x gender was F value was 0.22, for school type x subject x gender F value was 0.33, for school type x achievement x gender F value was 0.00, for subject x achievement x gender F value was 0.00, for school type x subject x achievement x gender F value was 0.29 (Table 14). The F values showed that the differences were not significant. The interaction effect of subject and achievement was significant. The mean score of high achievers in humanities was little higher (Mean = 11.56, S.D. = 2.66) than the high achiever students in science (Mean = 11.37, S.D. = 2.45) (Table 14(a)). The mean score of average achiever students of science was better (Mean = 11.13, S.D. = 2.51) than the average achievers of humanities (Mean = 9.87, S.D. = 3.05) (Table 14(a)). The difference was significant, $F = 4.11$, $p < 0.05$ which meant that in 95% cases the high achievers in humanities had better socio-economic status than high achievers in science, the average achievers in science had high socio-economic status than average achievers in humanities.

Table 15 presents the correlations of Performance, Self-esteem, Social Comparison, Socio-economic status with Personality variables for Students of School 1.

TABLE 15: Correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality variables for School 1 (N=140).

VARIABLES	Personality Variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSION	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	-0.05	0.07	-0.15	0.01	-0.06	0.41	0.02	0.14	-0.01	-0.06
SELF-ESTEEM	0.20	0.00	-0.11	0.01	-0.00	0.07	0.07	-0.19	0.05	0.25
SOCIAL COMPARISON	-0.12	-0.03	0.15	0.09	0.17	-0.02	-0.01	0.15	0.21	-0.03
SOCIO-ECONOMIC STATUS	0.15	-0.00	-0.01	0.02	-0.15	0.05	-0.01	-0.00	-0.01	-0.01

** p<0.01, * p<0.05

Performance correlated positively with need achievement ($r=0.41$, $p<0.01$) showing that all students of school 1 having high performance had high need achievement. It was also seen that self-esteem correlated positively with empathy ($r=0.20$, $p<0.05$) and with intellectual functioning ($r=0.25$, $p<0.01$). Students of school 1 having high self-esteem were high on empathy and intellectual functioning.

Social comparison correlated positively with neuroticism ($r=0.17$, $p<0.05$) and with dominance ($r=0.21$, $p<0.01$) showing those who frequently did social comparisons were more neurotic and dominant type. Socio-economic status was not significantly correlated with any of the personality variables.

Table 16 presents the correlations for Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality Variables for Students of School 2.

TABLE 16: Correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality variables for School 2 (N = 56).

VARIABLES	Personality variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSION	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	-0.09	0.17	-0.21	-0.04	-0.14	0.36**	0.25*	-0.22	0.01	-0.01
SELF-ESTEEM	0.16	0.00	-0.54**	-0.19	-0.16	0.25*	0.00	0.05	0.43*	0.20
SOCIAL COMPARISON	-0.14	0.15	-0.18	0.13	-0.09	0.22	0.22	0.03	-0.06	-0.06
SOCIO-ECONOMIC STATUS	0.12	0.26*	-0.28	-0.25	-0.24	0.08	0.01	-0.05	-0.18	0.21

** $p < 0.01$, * $p < 0.05$

Performance correlated positively with need achievement ($r=0.36$, $p < 0.01$) and with self-confidence ($r=0.25$, $p < 0.05$). Students of school 2 showing high performance had very high need achievement and high self-confidence. It was also seen that their self-esteem correlated positively with need achievement ($r=0.25$, $p < 0.05$) and with dominance ($r=0.43$, $p < 0.01$). Students having positive self-esteem had high need achievement and were dominant. Self-esteem correlated negatively with pessimism ($r = -0.54$, $p < 0.01$), meaning those having high self-esteem were not pessimistic. Socio-economic status correlated negatively with pessimism ($r = -0.28$), and with introversion ($r = -0.25$, $p < 0.05$) which indicated that students of school 2 coming from high socio-economic status were less pessimistic and were low on introversion. Socio-

economic status correlated positively with ego ideal ($r=0.26$, $p<0.05$) showing those students had high ego.

Table 17 shows the correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality Variables for Science Students.

TABLE 17: Correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality variables for Science Students (N=104).

VARIABLES	Personality variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSION	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	0.16	0.08	-0.27**	0.04	0.09	0.27**	0.01	0.02	-0.09	0.01
SELF-ESTEEM	0.31	0.13	-0.24**	-0.05	-0.02	0.05	0.03	-0.15	0.15	0.25*
SOCIAL COMPARISON	-0.13	-0.01	0.19	0.25*	0.27**	0.02	0.03	0.28**	0.14	-0.06
SOCIO-ECONOMIC STATUS	0.27*	0.07	-0.15	-0.01	-0.20*	-0.01	-0.08	0.14	0.01	0.17

** $p<0.01$, * $p<0.05$

It was seen from Table 17 that performance correlated negatively with pessimism ($r=-0.27$, $p<0.01$) and positively with need achievement ($r=0.27$, $p<0.01$). It can be said that students of science showing high performance were not pessimistic and had high need achievement.

Self-esteem correlated negatively with pessimism ($r= -0.24$, $p<0.05$) and positively with intellectual functioning ($r=0.25$, $p<0.01$). Science students having high self-esteem were less pessimistic and showed very high

intellectual functioning. Social comparison correlated positively with introversion ($r=0.25$, $p<0.01$), neuroticism ($r=0.27$, $p<0.01$) and with dogmatism ($r=0.28$, $p<0.01$). Science students making more social comparisons were introvert, neurotic and dogmatic. Socio-economic status correlated positively with empathy ($r=0.27$, $p<0.01$) and negatively with neuroticism ($r=-0.20$, $p<0.05$). Science students coming from high Socio-economic status showed high empathy and were less neurotic.

Table 18 shows the correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality Variables for Humanities Students.

TABLE 18: Correlations of Performance, Self-Esteem, Social Comparison, Socio-economic Status with Personality Variables for Humanities Students (N=93).

VARIABLES	Personality Variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSION	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	0.01	0.10	-0.25	0.03	-0.07	0.05	-0.04	-0.14	-0.04	0.17
SELF-ESTEEM	0.10	-0.10	-0.32*	-0.00	-0.14	0.20	0.05	-0.09	0.18	0.24*
SOCIAL COMPARISON	0.03	0.06	-0.21	0.05	-0.10	-0.17	-0.04	-0.07	0.00	0.13
SOCIO-ECONOMIC STATUS	0.16	0.08	-0.23	0.01	-0.24*	-0.06	-0.04	-0.16	0.01	0.12

** $p<0.01$, * $p<0.05$

It was seen from Table 18 that performance correlated negatively with pessimism ($r= -0.25$, $p<0.05$) which meant that students showing high performance in Humanities were less pessimistic. Self-esteem correlated

negatively with pessimism ($r=-0.32$, $p<0.01$) and positively with intellectual functioning ($r=0.24$, $p<0.05$). It can be said that students in Humanities having high self-esteem were not pessimistic and had good intellectual functioning level. It was also seen that social comparison correlated negatively with pessimism ($r= -0.21$, $p<0.05$). Students in Humanities who made social comparisons frequently were less pessimistic. Socio-economic status correlated negatively with pessimism ($r = -0.23$) and with neuroticism ($r=-0.24$, $p<0.05$) which meant that students in Humanities coming from high socio-economic status were less pessimistic and less neurotic.

Table 19 shows the correlations of performance, self-esteem, social comparison and socio-economic status with various personality variables for high achievers.

TABLE - 19: Correlations of Performance, Self-Esteem, Social Comparison, Social-Economic Status with Personality variables for High Achievers (N = 98)

VARIABLES	Personality Variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSION	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	0.05	0.02	-0.26**	0.05	0.13	0.16	0.05	0.21*	-0.11	0.02
SELF-ESTEEM	0.22*	0.08	-0.24*	-0.03	-0.14	0.11	0.11	-0.07	0.12	0.32**
SOCIAL COMPARISON	-0.14	0.08	-0.03	0.09	0.08	0.08	0.03	0.29**	-0.00	-0.06
SOCIO-ECONOMIC STATUS	0.17	-0.04	-0.24*	-0.26**	0.03	0.03	-0.09	0.12	0.06	0.09

** $p<0.01$, * $p<0.05$

Performance of high achievers correlated negatively with pessimism ($r = -0.26$, $p < 0.01$) which meant that high achievers with high performance were not pessimistic. Performance correlated positively with need achievement ($r = 0.16$) and dogmatism ($r = 0.21$, $p < 0.05$) which meant that when performance was high, the high achievers were high on the factors of need achievement as well as dogmatism.

Self-esteem correlated positively with empathy ($r = 0.22$, $p < 0.05$) and with intellectual functioning ($r = 0.32$, $p < 0.01$) which meant that high achievers having positive self-esteem were high in empathy and intellectual functioning. Self-esteem correlated negatively with pessimism ($r = -0.24$, $p < 0.01$), which meant that high achievers having positive self-esteem were not pessimistic. Social comparison correlated positively with dogmatism ($r = 0.29$, $p < 0.01$). High achievers making social comparisons were dogmatic.

Socio-economic status correlated negatively with pessimism and neuroticism. It correlated negatively with pessimism ($r = -0.24$, $p < 0.05$) and with neuroticism ($r = -0.26$, $p < 0.01$). High achievers with having higher socio-economic status were less pessimistic and less neurotic.

Table 20 shows the correlations of Performance, Self-esteem, Social Comparison, Socio-economic status with various personality variables for average achievers.

TABLE 20: Correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality variables for Average Achievers (N = 99).

VARIABLES	Personality Variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSION	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	0.02	0.15	-0.16	0.09	-0.19	0.17	0.06	0.05	-0.01	0.09
SELF-ESTEEM	0.20*	-0.06	-0.32**	-0.03	0.01	0.11	-0.04	-0.17	0.20*	0.18
SOCIAL COMPARISON	0.03	0.00	-0.04	0.18	-0.00	-0.12	0.02	0.04	0.13	0.09
SOCIO-ECONOMIC STATUS	0.25**	0.20*	-0.12	0.10	-0.20**	-0.20	-0.12	-0.00	-0.11	-0.20

** p<0.01, * p<0.05

It was seen that performance was either positively or negatively correlated with the personality variables but none of the correlations were significant. Self-esteem correlated positively with empathy and dominance ($r=0.20$ and $r=0.20$, $p<0.05$). Average achievers with high self-esteem were more dominating and were high on empathy. Self-esteem correlated negatively with pessimism ($r= -0.30$, $p< 0.01$) which meant that average achievers with high self-esteem were not pessimistic. Social comparison was not significantly correlated with any of the personality variables.

Socio-economic status correlated positively with empathy ($r=0.25$, $p<0.01$) and ego ideal ($r=0.20$, $p<0.05$). Average achievers having high socio-economic status were high on empathy and had high ego ideal. Socio-economic status correlated negatively with neuroticism ($r= -0.20$, $p<0.01$) and with need achievement ($r= -0.20$, $p< 0.05$). It showed that average achievers with high socio-economic status were less neurotic and were low on need achievement.

Table 21 shows the correlations of performance, self-esteem, social comparison, socio-economic status with the personality variables for Male Students.

TABLE 21: Correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality variables for Male Students (N = 88).

VARIABLES	Personality Variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSIO N	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	0.10	0.12	-0.37**	0.00	-0.11	0.25	-0.04	0.11	-0.00	0.01
SELF-ESTEEM	0.17	0.23*	-0.23*	0.04	0.01	0.09	-0.03	-0.07	0.21*	0.29*
SOCIAL COMPARISON	-0.04	-0.01	-0.19	0.09	0.08	0.02	0.07	0.21*	0.13	-0.09
SOCIO- ECONOMIC STATUS	0.33*	0.23*	-0.19	0.11	-0.14	-0.07	-0.16	0.03	-0.01	0.19

** p<0.01, * p<0.05

Performance correlated negatively with pessimism ($r = -0.37$, $p < 0.01$) which meant that male students with high performance were not pessimistic. Performance correlated positively with need achievement ($r = 0.25$, $p < 0.05$) which meant that male students with high performance were high on need achievement.

Self-esteem correlated positively with ego ideal ($r = 0.23$, $p < 0.05$) and with dominance ($r = 0.21$, $p < 0.05$) which meant that the male students having positive self-esteem were high on ego ideal and on dominance. Self-esteem correlated positively with intellectual functioning ($r = 0.29$, $p < 0.01$) which meant that male students with high self-esteem could have higher intellectual functioning. Self-esteem correlated negatively with pessimism ($r = -0.23$, $p < 0.05$) which meant that male students with high self-esteem were less pessimistic.

Social comparison correlated positively with dogmatism ($r = 0.21$, $p < 0.05$) which meant that male students who made social comparisons frequently

were more dogmatic. Socio-economic status correlated positively with empathy ($r=0.33$, $p<0.01$) and with ego ideal ($r=0.23$ at $p<0.05$) which meant that male students from high socio-economic status had high empathy and high ego ideal.

Table 22 presents the correlations of Performance, Self-Esteem, Social Comparison, Socio-Economic Status with Personality Variables for Female Students.

TABLE 22: Correlations of Performance, Self-Esteem, Social Comparison, Socio-economic Status with Personality variables for Female Students (N=108).

VARIABLES	Personality Variables									
	EMPATHY	EGO IDEAL	PESSIMISM	INTROVERSION	NEUROTICISM	NEED ACHIEVEMENT	SELF CONFIDENCE	DOGMATISM	DOMINANCE	INTELLECTUAL FUNCTIONING
PERFORMANCE	-0.01	0.08	-0.21	0.06	-0.18	0.25	0.07	-0.05	-0.01	0.07
SELF-ESTEEM	0.26	0.02	-0.16	-0.19	-0.20	0.09	0.20	-0.18	0.15	1.00
SOCIAL COMPARISON	-0.04	-0.23	-0.34	-0.11	-0.14	0.09	0.05	-0.21	0.14	0.20
SOCIO-ECONOMIC STATUS	0.09	0.00	-0.20	-0.07	-0.29	0.06	0.06	-0.02	0.01	0.09

** $p<0.01$, * $p<0.05$

It was seen from Table 22 that performance correlated positively with need achievement ($r=0.25$, $p<0.01$) and negatively with pessimism ($r= -0.21$, $p<0.05$) which meant that female students showing high performance had high need achievement and were less pessimistic. It was seen that self-esteem correlated positively with empathy ($r=0.26$, $p<0.01$) and with self-confidence ($r=0.20$, $p<0.05$). Female Students having positive self-esteem

had high empathy and more self-confidence. Social comparison correlated negatively with ego ideal ($r = -0.23$, $p < 0.05$) and with pessimism ($r = -0.34$, $p < 0.01$). Social comparison also correlated negatively with dogmatism ($r = -0.21$, $p < 0.05$) which meant that female students who made social comparisons frequently were less egoistic, were not pessimistic and were less dogmatic. Socio-economic status correlated negatively with pessimism ($r = -0.20$, $p < 0.05$) and with neuroticism ($r = -0.29$, $p < 0.01$), which meant that female students coming from high socio-economic status were less pessimistic and less neurotic.

Differential patterns of relationship among performance, self-esteem, social comparison, socio-economic status with personality characteristics were thus noted for students of school 1 and 2, students of humanities and science, high and average achievers, male and female students.

CHAPTER V
DISCUSSION

CHAPTER V

DISCUSSION

The discussion of results is presented in this chapter with reference to the hypothesis tested.

HYPOTHESIS - 1:

There will be significant main effects of school type, subject, achievement and gender on performance and on various socio-psychological disposition (Personality characteristics, self-esteem, social comparison, socio-economic status) and performance. The results of ANOVA partially confirmed this hypothesis.

Results showed that the main effects of school type were significant on performance, personality variable of pessimism and socio-economic status. The students of Public school had significantly better performance and socio-economic status than the students of Government school. The difference in performance in the schools might be due to difference in educational facilities in two schools. Public school had better facilities like better libraries, abundance of books, more motivated teachers, who provided personal attention and right kind of motivation to the students to perform well. Government school did not have enough funds for equipping itself with better educational facilities for improving performance of the students. Educational institutions are known to vary in structure, composition, resources, climate and hence achievement. Coleman et al., (1966) reported that low quality school environment affected the achievement of the students. Desai (1979) and Hirunval (1980) found positive relationship between institutional characteristics and academic achievement of pupils. Sinha (1977) observed in a comparative study that children from schools which had better educational facilities, better educational climate with teachers providing proper motivation and encouragement to the students performed significantly higher than their counterparts in ordinary schools. Veeraraghavan (1985), Sengupta and Veeraraghavan (1985) found the type of schools related to students academic performance. Students of public school showed significantly higher academic performance than those from missionary,

municipal corporation and state government schools. Veeraraghavan and Bhattacharya (1989) observed that public and missionary schools had the highest achievement and government schools the lowest achievement. The difference in socio-economic status of the students of Public and Government school were perhaps due to the different home environment, education and occupation of the parents of the students in two schools. Mostly students of Public school had well educated parents working in professional and managerial occupations and the students mainly belonged to urban areas; whereas the students of Government school had rural background, had parents having relatively low education who might have been engaged in family occupation, like farming or business and for whom education was not as important as earning money for livelihood. More pessimism amongst the students of Government school might be due to the social perception of the two schools. Public schools in general are viewed as better schools where there is lot of screening for admission and competition is very high. Such schools believe more on achievement outcome as the input is at higher level. The social status of Public school raises the future expectations of the students. Because of more administrative autonomy, the curriculum pattern remains flexible and students are made to be professionally oriented. In Government school fees charge is very nominal and admission criteria is not so rigorous. Education in Government school mainly consists of teaching the prescribed curriculum and no innovative step is taken for preparing the students for the competitive market.

The main effects of subject were found to be significant on performance, social comparison, pessimism, neuroticism and need achievement. Students of science had better performance and were high on the factor of social comparison than the students of humanities. The differences in performance can be explained in terms of the differences in the nature of contents and methods of evaluation of the two subjects. Besides, the science students had more interactional opportunities with teachers and more clarity which influence their academic performance. Mohanty and Pani (1979) reported that student-teacher-classroom interaction increased the performance of students. The curriculum of science students included laboratory and field work in small

groups which facilitated in the personal interaction between students and teachers. As reported by Pace and Stern (1958), the academic performance was facilitated by interaction between students and faculty. The patterns of in the personal interactions with faculty were found to have an independent and direct influence not only on students intellectual development but also on their academic performance (Rock, Centra, Linn, 1970 and Astin, 1971).

The students of science were high on the factor of social comparison than the students of humanities. Performance in science was dependent upon high ability (Bell, 1989). Since science students have the capacity to perform better, they frequently made social comparison perhaps for a unidirectional drive upward - generally interpreted to mean that people strove to be more capable than the correct level of performance, and more capable than the persons with whom they compared themselves. As Festinger (1954) reported that people preferred to compare themselves to others in order to improve their current level of performance. This finding is consistent with the finding that students of science were high and need achievement than the students of humanities. The difference might also be explained in terms of the differences in admission criteria set for students in the two subjects. Performance based admission process puts the science students in high ability category, which made them feel that they were better as a group. This raised their need achievement level - need achievement being a desire to compete with a standard of excellence.

The students of humanities were found more pessimistic and neurotic than the students of science. This difference is explained in terms of the attitude of society, career options and methods of evaluation for the students of the two subjects. Society perceives science students as academically better than humanities student and science stream as having various career alternatives. Besides, most courses in humanities stream is not professionally oriented. This feeling might have made the students of humanities more pessimistic. Gardner et al. (1960) reported that very serious, achievement oriented, realistic and independent students opted for science. The methods of evaluation for the science students were more fixed, objective and reliable,

due to which better relation between self-concept and ability was clearly perceived by them. Whereas for the humanities students methods of evaluation were subjective making the students fully dependent upon the teacher's assessment of their performance. A similar finding had been reported by Gayathri (1979). Students of humanities perhaps did not find any concrete link between their input and output as such which make them hopeless in terms of career achievement.

The results showed that high and average achievers differed significantly on performance and personality variable of need achievement. The high achievers had better performance because as a group they were boisterous, out-going, excitable, alert, bright (Borg, 1965) having a strong desire to compete with a standard of excellence, where winning may be the primary concern. The average achievers lacked such desire and hence had lower performance. Patel and Parikh's (1984) showed that high achievers performed better than average achievers. Gallagher (1991) observed that high achievers were generally superior in most academic areas compared to the low achievers. The high need achievement among high achievers than the average achievers perhaps was due to their feeling that they were close to their "top goal" and that they have the potential to reach it. This feeling perhaps motivated them towards success to cope with the challenge in a realistic way. The average achievers as a group was probably guided by contradictory goals which did not provide the required motivation to excel. Muthayya (1964) showed that high achievers were significantly high on need achievement compared to the average achievers. Hota (1986) explored the type and degree of relationship between academic achievement and some of the personality trait of high and low achievers and showed that high and low achievers differed significantly in their need achievement, self assertion and future outcome.

The results showed that the male students were slightly more self-confident than the female students. Males and females acquire their sex roles and identity through the process of socialisation (Kohlberg, 1969). Schools reflect the prevailing cultures and promote the pre-dominant sex style through

instructional text, achievement test, sports programmes, vocational training, sex differentiated curricula, pattern of play, peer selection and vocational choice. Male students were given opportunity for enhancing self-assertiveness, self-confidence. Females on the other hand were more inter dependent and submissive due to the limited opportunities. Marsh, Byrne and Shavelson (1988) explained difference in self-concept, self-confidence in terms of sex stereotype and differential sex role socialisation patterns. Similar views were reported by Mecce, Parsons, Kaczala, Goff and Futterman (1982); Fennema and Peterson (1985). The results also revealed that the females students were more optimistic than the male students. This perhaps happened due to the alternative ways of getting social support and females having limited goals. Males are encouraged within our society to be independent, instrumental, and exploratory and perhaps in general, more individuated than females at all ages. (Bartle, Anderson and Sabatelli, 1989; Bartle and Sabatelli, 1989; Lopez, Campbell and Watkin, 1986; 1988; McDermott et al., 1983) Males are very much aware that they have to be the bread winner and self dependent in future and as such more career oriented but competitive market some what restricts their opportunities. This makes them more pessimistic.

HYPOTHESIS - 2:

There will be significant interaction effects of school type, subject, achievement and gender on performance and various socio-psychological dispositions (self-esteem, social comparison, personality characteristics and socio-economic status). The results of ANOVA partially confirmed the hypothesis.

The results showed that school type in interaction with subject had significant effect on performance, self-esteem, social comparison, pessimism and socio-economic status. Both science and humanities students in Public school had better performance and socio-economic status and were more optimistic than the science and humanities students in Government school Hollingshead (1942), Anastasi (1958), and Harsh (1950) were of the opinion that social behaviour of the adolescents was related functionally to the socio-economic

status and each stratum of society tends to leave its mark on the personality of its individuals through habits of speech, ambition, emotionality similarities of experience and training. Science and humanities students in Public school came from urban areas and had better socio-economic status as they had educated parents working in high status occupations. They received the right kind of encouragement and home environment conducive to performing well in school. Mother's employment and education perhaps encouraged children to have a more optimistic or positive attitude towards studies and their future as the family income got supplemented and in many cases the model role of the mother was imitated by her children. Patel (1977) showed that pupils of urban areas were high achievers. Singh (1983) revealed that urban higher secondary school students had better academic achievement and positive attitude than rural students. Chatterjee and Paul (1984) also found that urban students had right kind of environment for better performance compared to the students with rural backgrounds. Misra (1986) found that academic achievement of the rural secondary school students were lower than the achievement of the urban students.

Students of humanities in Public school were high in the use of social comparison than the students of humanities in Government school. The students of humanities in Public school had better performance perhaps they frequently compared their performance for a unidirectional drive upward. Festinger (195) also hypothesised a unidirectional upward generally interpreted to mean that people strove to be more capable than their current level of performance, and more capable than the person with whom they compare themselves. The students of science in Government school had slightly better self-esteem than the students of science in Public school. Social Identity Theory of Tajfel (1981) identify the close relationship between an individual's self-concept and membership in the social group. People's group identification and interpretation of the group membership into their self-concepts ascribed the need for a positive self-image. Perhaps students of science in Government school as a group had stronger identity with their group which led them to have more positive self-concept compared to the students of science in Public school.

Subject in interaction with achievement had significant effects on performance and socio-economic status. The high and average achievers in science had better performance than the high and average achievers in humanities. The difference may be explained in terms of the societal expectation, ability, classroom environment and future prospects. The subject matter of humanities is perceived as commonsensical and often taken for granted, whereas that of science is perceived as "real knowledge" which needs common learning (Dass, 1994). There is an intense and informal interaction between the teachers and students of science through laboratory activities which leads to clarity and better understanding of subject matter. Students with higher percentage of marks opt for science education and strongly believed that education was "tougher" (Dass, 1994). Humanities was not considered so selective and often average students studied the subject. That ability played an important role in performance of high and average achievers in science is supported by the observation of Bell (1989), who also obtained similar results. The high achievers in humanities had slightly better socio-economic status than the high achievers in science. High achievers in humanities had educated parents in professionally high status occupations and hence they were socially and economically better compared to the high achievers in science.

School type in interaction with subject and gender had significant effect on intellectual functioning. The male and female students of science in Public school had higher intellectual functioning than the male and female students of science in Government school. The difference may be explained in terms of different educational facilities available in the two schools. Male and female students of science in Public school had better science laboratories, more motivated teachers who encouraged them to realise their potentials to the fullest by helping them to participate in educational activities outside the school curriculum like science projects, exhibition of scientific models created by the students. In Government school male and female students of science were denied comparable educational facilities since science teaching was confined to what was in the prescribed curriculum.

The female students of humanities in Public school had better intellectual functioning than the female students of humanities in Government school. The difference may be explained in terms of the different educational environment that female students of Humanities were exposed to in the two schools. Humanities was not considered very career oriented by the students but because Public school had better libraries facilities and more opportunities to participate in educational activities like dramas and plays related to subjects like history and English, the potentialities, creative abilities of the female students of humanities in Public school got expressed. This perhaps helped them to have better intellectual functioning i.e. global and mental capacity to act purposefully and think rationally. The male students of humanities in Government school had better intellectual functioning than the male students of humanities in Public school. The difference may be due to the different attitudes towards the subject held by the male students in humanities of two schools and teaching strategies available in the schools. The male students of humanities in Public school perhaps considered the subject less career oriented with restricted job opportunities and hence did not strive hard to express their creative potential in the subject. Male students of humanities in Government school perhaps received right motivation in school and strove hard to excel in the subject with the motive of getting into the limited carrier options available in the subject.

HYPOTHESIS 3:

There will be differential pattern of relationships among performance, personality, self-esteem, social comparison and socio-economic status for different types of schools high and average achievers, students of science and humanities and male and female students. The results of correlations supported this hypothesis.

The correlation showed that high achievers having high performance were not pessimistic and were high on need achievement and dogmatism whereas for average achievers showing high performance there were no significant relationship with any personality variables. The high achievers as a group had high intellectual curiosity, persistent goal directed behaviour, facility of

expression, virtuosity, high level of abstract thinking, Borg (1965). They had one "top goal". This feeling perhaps motivated the high achievers to compete with a standard of excellence and have more positive attitude towards their future i.e. high need achievement. Muthayya (1964) and Bhatnagar (1967) found that need for achievement was positively correlated to academic students of achievement. High achievers were dogmatic perhaps they felt that since they had the ability and performed well academically, they were a better group which enhanced their self worth. This perhaps made them have negative feeling towards others outside group. This is in consistent with social identity theory, which, in general, predicted that similarity, whether of attitudes or status, led to increase in group differentiation and out group derogation (Turner, 1978). For average achievers performance and personality characteristic were not significant because as a group, they had no such concrete goals which perhaps did not motivate them to strive forward. Since they are much aware of their ability they perhaps rely much upon social factor than ability factor in development process.

The high achievers having high self-esteem were not pessimistic, had high empathy and high intellectual functioning; whereas average achievers having high self-esteem were not pessimistic, had high empathy and were dominant but had no significant relationship with intellectual functioning. High achievers as a group had high ability in high performance which led them to high intellectual functioning i.e. mental capacity to think and act purposefully. High achiever perhaps created the self-image out of self-evaluation and positive social perception which perhaps led them to more optimistic. This positive self worth perhaps led them to have positive feelings towards other and thus they showed more empathy. This is in consistent with perceptual theory given by Gestalt psychologists which states that "we perceive others as we are not as they are". This was also found true in case of average achievers.

For average achievers as a group, ability and high performance was not as important as social factor which perhaps were more responsible for their high self-esteem. Perhaps better peer relationship, better contacts with people outside school environment provided more social support. This led them to

have dominant attitudes towards other. This is found consistent with the present finding that for average achievers socio-economic status is positively related to the ego ideal.

The high achievers having high socio-economic status were not neurotic and pessimistic; whereas average achievers having high socio-economic status had high empathy, were neurotic and had low need achievement factor. High achievers as a group of high ability and this in interaction with better socio-economic status (educated parents providing required encouragement) perhaps made them more optimistic. Average achievers as a group had average ability which made them feel that success was not easy for them. Perhaps this feeling led them to have more negative attitude towards the future with less desire to compete others. Average achievers with high socio-economic status had high empathy because their family status enhanced their self worth and feel positive as they felt socially privileged. This positive feeling towards oneself perhaps encouraged them to have better understanding of others feelings.

The high achievers who frequently made social comparison were dogmatic; whereas for average achievers this was not found to be true. When one engages in social comparison, one tries to know the potentialities and limitations of others. In case of high achievers social comparison clarifies the self-position in a group situation. According to Wills (1981) when subject was presented with the significant ego threat they devalued and derogated other persons. High achievers who made frequent social comparison perhaps compared ones status with those faring better than the self which perhaps threatened their ego. This led them to have feelings of envy and intolerance towards others. Wheeler and Miyaka (1992) found that upper social comparisons among high achievers led to negative feelings. Social comparison was not as important for average achievers as seen in the absence of any significant relationship with the personality variables.

Male students showing high performance were not pessimistic and had high need achievement; whereas female students showing high performance were

pessimistic and had high need achievement. This difference may be attributed to the socialisation pattern (Kohlberg, 1965) as females learnt over the years to be more socially submissive. Males were expected to be more assertive, rational and out-going which made them more optimistic having a desire to compete with standard of excellence. Moreover, parental expectations and encouragement remain always high for male children. It has been found that males had higher personal self, intellectual self, social self and self decision (Vasanth, 1973 and Marsh, 1989). Females were aware that they would have to work harder than males to meet the societal expectation, which were discriminative. This feeling made them more optimistic.

Male students having high self-esteem, had high ego ideal, high intellectual functioning, were dominant and less pessimistic whereas females with high self-esteem had high self-confidence and empathy. This difference could be attributed to socialisation and expectations from them. Male students were socially expected to be outgoing, rational, assertive and dominating which together with positive self-esteem helped them to have high ego ideal. This motivated them to have high intellectual functioning. Sociologist Popenoe (1988) says that the validation of role models were one of the principal way through which gender role gains social currency. The public media - including newspapers, radios, television has consistently serve as influential source of information role model and reflected the social status of females in society. Incidence of successful women careerists in different areas including male oriented occupation increase the self-confidence of female (Zongjian, 1993). Increased intellectualisation of women in general boosted women's self-concept (Xiaotian, 1993). Thus socialisation of females made them more empathetic but at the same time they were aware that to meet the expectation they would have to strive harder which increased their self-confidence.

Male students who frequently made social comparison were dogmatic; whereas such female students were optimistic but were less dogmatic and had low ego ideal. Upward social comparison led to negative effect (e.g. Wheeler and Miyake, 1992) often leading to feelings of envy inferiority or

relative deprivation. Male students perhaps compared themselves, with individuals in high status, because their social circle is wider than females. This perhaps led them to have negative feelings of intolerance and envy towards them. Downward social comparison i.e. comparing one's status with less fortunate others led to self-enhancement (Wills, 1981). Females students perhaps made downward social comparison for self enhancement. This led them to have an optimistic attitude. Female students at the same time face restrictions due to societal expectations as they were expected to be more submissive. This led them to have low ego ideal - low desires, as they thought realisation of those goals were difficult. However the males having high socio-economic status had high empathy and high ego ideal whereas females having high socio-economic status were not neurotic but were little pessimistic. It seems for both males and female socio-economic status plays significant roles to develop positive feeling towards themselves as well as others.

Students of science having high performance were not pessimistic and had high need achievement; students of humanities having high performance were less pessimistic. It shows that performance enhances one's hopefulness irrespective of type of education one receives. But Arunjati (1971) found that the nature of curriculum and subjects offered by students influenced the academic achievement scores and their overall personality. Thus nature of subject, attitude of the students towards the subject perhaps led the high achievers in science to be more optimistic and have high need achievement. Cohen, 1976 reported that student's choice of a curricula and performance in them were associated with their self-concept of ability. Students of humanities with high performance were confident of their future perhaps because there positive academic self-concept motivated them to have a more optimistic outlook at the future. Gayathri (1979) also found that academic self-concept of students significantly related to their academic performance and their future outlook. This is corroborated with the findings showing science as well as humanities students having high self-esteem had high intellectual functioning and were more optimistic.

Students of humanities with positive self-esteem get motivated to work harder perhaps they anticipated that their faith in themselves would lead them to the goal. This made them more optimistic. Vroom (1964) also held that person's motivation toward a goal would be determined by his/her anticipated values of all the outcomes. Students of science who often made social comparison were introvert, neurotic and dogmatic; whereas such students of humanities were less pessimistic. The Social Identity Theory of Tajfel (1981) identified a close relationship between an individual's self-concept and membership in the group. Science students because of high competition were not integrated in their group which perhaps made them introvert, neurotic and dogmatic with a tendency of emotional instability, avoiding social gatherings and intolerance towards those having similar beliefs. In case of humanities who made frequent social comparison, perhaps they evaluated their goal achievement in terms of other's similar ability as such were more optimistic.

The students of science from high socio-economic status had high empathy and were not neurotic; whereas such students of humanities were not pessimistic and neurotic. It appears that science students social interaction is highly influenced by their parental status whereas for humanities students it is related to their career.

The students of Public school having high performance had high need achievement; such students of Government school had high self-confidence as well as high need achievement. Educational institutions are known to vary in structure composition, resources, climate and hence achievement. Coleman et al. (1966) reported that low quality school environment effected the achievement of the students. Public school had better educational facilities and practices, educational innovation which motivated the students to perform well and have high need achievement. It also suggested that for the students of both the schools academic performance was motivating factor in achieving other needs. High academic performance provided a feeling of success in future. High self-confidence among high performers in Government school and not in Public school perhaps resulted by the factor of more heterogeneity in ability, performance and parental status amongst

student in Government school than in Public school. The self-confidence because of high academic performance perhaps led to high need achievement in case of Government school students. This was evident from a direct positive relationship between self-esteem and optimism and need achievement for Government school students.

The students of Public school having positive self-esteem had high empathy and high intellectual functioning. Social Identity Theory of Tajfel (1981) identified a close relationship between an individual's self-concept and membership in the group. Students of Public school as a group perhaps had strong identity with their group alongwith positive self-concept. This might have led them to have positive feelings and compassion towards the group members. Students of Government school perhaps did not get integrated in their group, may be they had conflicting views about the group members. Thus they were dogmatic. Public school had better educational facilities which encouraged them to participate in educational activities outside the curriculum. Perhaps their participation in such activities helped them to develop their creative abilities. This led them to have high intellectual functioning. Students of Government school with positive self-esteem were motivated to strive harder perhaps they anticipated that their faith in themselves would lead them to their goal. This attitude might be the reason for them to be more optimistic and have high need achievement. Vroom (1964) also held that person's motivation towards a goal would be determined by his or her anticipated values of all the out comes.

The students of Public school who frequently made social comparisons were dominant type; whereas such students of school 2 had no significant relation with dominance and any other personality variables. Bandura (1977) pointed out that one's belief in one's potentialities leads to feeling of control. Students of Public school frequently compared perhaps with those in the low status group. Their high status might them led them to have a dominating attitude and to look down upon those with low status.

High socio-economic status among students of Public school did not correlate significantly with personality factors; whereas socio-economic status of students of Government school positively correlated with ego ideal and introversion. Students of Public school had comparable but high socio-economic status, admission criteria in the school was based on their social status as well as ability. Perhaps, as socially homogenous group, the students of Public school had no significant relationship with any of the personality variable. Students of Government school from high socio-economic status perhaps received the right motivation and encouragement from home. It may be said that family status plays a differentiating role in the personality development of students. Hollingshead (1942), Anastasi (1958), and Harsh (1950) were also of the opinion that position of family leave its mark on the personality of its individuals through habits of speech, ambition, emotionality, similarities of experiences and training. Parents education and occupation and role model of the parents encouraged them to have a more realistic out look.

In sum, differential pattern of relationships were thus observed among performance, self-esteem, social comparison, socio-economic status with personality characteristics of students of Public school and Government school, students of Science and Humanities, high and average achievers and male and female students.

CHAPTER VI
SUMMARY, CONCLUSION,
IMPLICATION, SUGGESTIONS.

CHAPTER - VI

SUMMARY, CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS

The present study focussed on the following problem:

Some of the socio-psychological dispositions of high and average achievers were compared to understand the dynamics of their performance.

The main objectives of the research were:

1. To compare the high performing and average performing male and female students in science and humanities on various socio-psychological dispositions (personality characteristics, self-esteem, social comparison, socio-economic status).
2. To compare the socio-economic status of male and female high and average achievers in science and humanities.
3. To find out the relationships among performance with self-esteem, social comparison processes and personality characteristics for the high and average achiever male and female students of science and humanities.

The following hypothesis were tested:

Hypothesis - 1. There will be significant main effects of school type, subject, achievement and gender on various socio-psychological dispositions (personality characteristic, self-esteem, social-comparison), performance and socio-economic status.

Hypothesis - 2. There will be significant interaction effects of school type, subject, achievement and gender on various socio-psychological dispositions

(personality characteristic, self-esteem and social-comparison) performance and socio-economic status.

Hypothesis - 3. There will be differential pattern of relationships among performance, personality, self-esteem, social comparison and socio-economic status of high and average achiever, male and female students, students of science and humanities in different types of schools.

The sample for the study was selected on the basis of percentage of marks obtained in the Class X Board Examination and divided into high achieving and average achieving male and female students on the basis of percentage by using the group mean.

A 2x2x2x2 Ex-post, factorial research design was used. The study used school type, subject type, achievement and gender as matching variables, socio-economic status as demographic variables and performance, self-esteem, social comparison and personality as measured variables.

A checklist prepared by combining some of the personality characteristics included by Muthayya and of gifted students by Jaiman (1994) was used for measuring personality variables. Rosenberg's Self-Esteem Test (1965) was used to measure self-esteem and Iowa-Netherlands Comparison Orientation Measure designed by Gibbons and Bunnk (1999) was used for measuring social after making sure that the items were meaningful. The data were statistically analysed by using the techniques of ANOVA and Correlations, Means and Standard Deviations were calculated for all the measured variables.

The main findings may be summarised as below:

- (1) Hypothesis 1 was partially confirmed. It was found that students of Public school had better performance, higher socio-economic status and were optimistic compared to the students of Government school,

students of Science had better performance, were high on social comparison factor, were more optimistic, had high need achievement compared to the students of Humanities. The students of Humanities were neurotic than the students of Science. The high achievers had better performance and were high on need achievement factor compared to the average achievers. Male and female students did not differ significantly on performance. Male students had slightly better self-confidence than the female students. The female students were more optimistic compared to the male students.

- (2) Hypothesis 2 was partially confirmed. It was found that Science and Humanities students in Public school had better performance, socio-economic status and were more optimistic than the Science and Humanities students in Government school. Students of Humanities in Public school were high on social comparison factor than the students of Humanities in Government school, the students of science in Government school had slightly better self-esteem than the students of science in Public school. The high and average achievers in science had better performance than the high and average achievers in humanities, the high achievers in humanities had slightly better socio-economic status than the high achievers in science. The male and female students of science in Public school had high intellectual functioning than the male and female students of science in Government school. The female students of humanities in Public school had better intellectual functioning than the female students of humanities in Government school, the male students of humanities in Government school had better intellectual functioning than the male students of humanities in Public school.
- (3) Correlational analysis revealed that high achievers with high performance were optimistic, were dogmatic and had high need achievement whereas such average achievers had no significant relationships with personality variables. High achievers with positive

self-esteem were pessimistic, had high empathy, high intellectual functioning whereas such average achievers were not pessimistic, had high empathy and were dominant. High achievers who frequently made social comparison were dogmatic whereas such average achievers had no significant relationship with dogmatism or any other personality variables. High achievers with high socio-economic status were not neurotic and were less pessimistic whereas such average achievers had high empathy, ego ideal, were little neurotic and were low on need achievement.

The male students with high performance were optimistic and were high on need achievement whereas such female students were little pessimistic and were high on need achievement. Male students with positive self-esteem were high on ego ideal and dominance factors, and had high intellectual functioning; whereas such female students had high empathy and self-confidence. Male students who frequently made social comparison were high on dogmatism; whereas such female students were high on intellectual functioning factor, had less ego ideal, were little dogmatic and were not pessimistic. Male students with high socio-economic status had high empathy, were high on ego ideal factor, whereas such female students were little pessimistic and were not neurotic.

The students of humanities with high performance were less pessimistic whereas such science students were optimistic and had high need achievement. Students of humanities with positive self-esteem had high intellectual functioning and were not pessimistic whereas such science students had high intellectual functioning and were little pessimistic. Students of humanities who frequently made social comparison were little pessimistic, whereas such science students were introvert, neurotic and dogmatic. Students of humanities with high socio-economic status were little pessimistic and neurotic

whereas such students of science had high empathy and were little neurotic.

The students of Public school with high performance had high need achievement, whereas such students of Government school had high need achievement as well as high self-confidence. Students of Public school with positive self-esteem had high empathy, high intellectual functioning and were little dogmatic, whereas such students of Government school had high need achievement, were dominant and were optimistic. Students of Public school who frequently made social comparison were neurotic and dominant whereas such students of Government school had no significant relationship with any of the personality variables. Students of Public school with high socio-economic status had no significant relation with any of the personality variables whereas such students of Government school had ego ideal and were not pessimistic nor introvert.

CONCLUSIONS:

The following conclusion can be drawn from the study:

School type significantly influenced socio-psychological dispositions. Students of Public School had high self-esteem, need achievement, were more optimistic and frequently made social comparison than the students of Government school.

Subject or course of study was found having some influence on the socio-psychological disposition of students. Students of science had high self-confidence, were more optimistic and frequently made social comparison than students of humanities.

Achievement was found to be a major determinant of personality development. High achievers had high intellectual functioning, high self-esteem, high need achievement, were more optimistic, made frequent social

comparison, had high ego ideal and high empathy, than the average achievers.

Gender difference on socio-psychological disposition was not found to be very prominent. It was found that the females were more optimistic than males. Males had slightly higher self-confidence than females.

Academic performance was found to be influenced by self-esteem, need achievement, social comparison processes, optimism for students of Public and Government school, students of science and humanities, high and average achievers and male and female students.

Parent's education, occupation and family income was found to influence the personality development of the students by influencing their self-confidence, self-esteem, need achievement and perception of future.

IMPLICATIONS:

Public school students had high self-esteem, need achievement, frequently made social comparison and were optimistic than students of Government school. This may have implications for institutional planning and teaching process in Government school. Focus should be on overall personality development rather than only on curriculum. Students should be engaged in various activities so that their competency in non-academic fields could be improved.

The findings showing high social-comparison, need achievement and optimism among science students than students of humanities may have implications towards curriculum pattern in humanities and other support services. It seems that some professional elements should be injected in humanities stream. The humanities students were more pessimistic as revealed by the study. This can be reduced by reducing abstraction and introducing more objectivity. This can help them in linking their effort with outcome, and achieve close to their real ability level. Career counselling could

be given to the students in a regular basis so that they would develop more faith on the ability to achieve in future.

The distinct socio psychological dispositions of high achievers revealed by the present study are high intellectual functioning, self-esteem, need achievement, empathy, better social comparison processes than the average achievers. This implied that average students potentialities were not converted into appropriate action either on account of system deficits or personal inadequacies. Such a finding should have some implications for the teachers, administrators and parents. They should try to find ways in which average achievers could utilise their abilities more meaningfully and get best out of their potential. An understanding of the deficits in academic self concept could be used in designing programmes for their counselling and guidance and enhance the average achievers performance and get best out of their capabilities.

Since average achievers have less academic capability compared to the high achievers, they should be given opportunities to involve themselves in other school activities so that their achievement in non-academic activities would enhance their self-esteem and develop good perception of their future. Some remedial classes for average achievers could be arranged so that they can realise their potentialities in better ways.

Co-operative learning situation could be planned in class room teaching situation so that average achievers could get opportunities to interact with the high achievers at a personal level and that any feeling of inferiority arising out of comparatively lower academic performance could be overcome.

LIMITATIONS:

- (1) The study was done under variety of methodological constraints like limited time and resources which prevented one to look into the depth and width of the socio-psychological correlates.

- (2) The study was limited to a few socio-psychological variables only.
- (3) The sample was drawn from two schools in Delhi and hence it is not a true representation of complete population.
- (4) The study has explored only the qualification, education and income of the parents. The parent-child interactions with respect to home environment and its impact on education should have been explored. A longitudinal study may throw light on the developmental aspect of socio-psychological disposition and its influence on achievement.
- (5) Details of the types of schools with respect to their climate and its effect on the performance of high and average achievers and personality variables have not been investigated.
- (6) Another limitation of the present study stemming from its exploratory nature was that the Government schools were different in comparison to Public school in terms of human inputs and conditions of teaching. Government schools did not have similar educational facilities like enriched curriculum, better teaching strategies as obtained in Public school. The results may have differed because of this.

SUGGESTIONS

- (1) The variations in the type of institutions in terms of organisational climate, physical structure, peer group influence or student competence etc., can also be studied to understand their impact on performance.
- (2) A longitudinal study can be undertaken to understand the variations in levels of aspirations of students - ability, interest and personality characteristics of high and average achiever male and female students of science and humanities.

- (3) Academic institution must develop educational courses and enrichment programs for the proper development of the average achievers and their better performance.
- (4) Further studies could be taken up to study the socio-psychological disposition of high and average achiever in two different settings - rural and urban at various levels of education - primary, upper primary and secondary so that early interventions could be thought of.

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APPENDIX I

CHECKLIST FOR PERSONALITY PROFILE

Direction:

Here are some questions regarding the way you behave, feel and act. After each question is a space for answering in terms of 'Yes' or 'No'.

Try to decide whether 'Yes' or 'No' represents your way of acting or feeling and then encircle 'Yes' or 'No' as the case may be. There are no right or wrong answers. Work quickly and do not spend much time over any question. I want your first reaction and not a long drawn out thought process. Please make sure not to leave any question unanswered:

1.	I am repeatedly guided in my actions by high hopes of possible success.	Yes	No
2.	I prefer to work out solutions all by myself.	Yes	No
3.	Most people can be trusted.	Yes	No
4.	I enjoy studying as much as playing.	Yes	No
5.	I think like if is just one worry after another.	Yes	No
6.	I feel lonely even when with friends.	Yes	No
7.	I am often troubled by feelings of guilt.	Yes	No
8.	I like to lead my group.	Yes	No
9.	I am always full of new ideas.	Yes	No
10.	Small troubles "get on my nerves".	Yes	No
11.	I have many friends.	Yes	No
12.	I am very curious about new things.	Yes	No
13.	I get very worried when I find others around have problems.	Yes	No
14.	I ask probing questions.	Yes	No
15.	I am easily hurt when people find fault with my work.	Yes	No
16.	I find it difficult to speak in public.	Yes	No
17.	I consider other's point of view as important as mine.	Yes	No

18.	I keep on working persistently on a task.	Yes	No
19.	Criticism does not discourage me.	Yes	No
20.	I am very talkative at social functions.	Yes	No
21.	When my interests are in danger, I concentrate on my task and forget about others.	Yes	No
22.	No immediate compensation can console me for the failure of my highest hopes.	Yes	No
23.	I take the responsibility of introducing someone at any meeting.	Yes	No
24.	I like to take added responsibility on myself.	Yes	No
25.	After having done something important, I often feel I could have done better.	Yes	No
26.	I am very calm and relaxed in competitive situations.	Yes	No
27.	I learn fast.	Yes	No
28.	I do not worry about grades in school.	Yes	No
29.	In a group discussion, I always like to tell what I think.	Yes	No
30.	I remain cheerful even when things go wrong.	Yes	No
31.	I have a good memory.	Yes	No
32.	I dislike being told how I should work.	Yes	No
33.	I am unable to make up my mind in time for action.	Yes	No
34.	I listen to my seniors howsoever unreasonable they may be.	Yes	No
35.	No body ever cares whatever happens to me.	Yes	No
36.	I like to be quiet when with others.	Yes	No
37.	I think there is little change of getting ahead in class unless one uses unfair means.	Yes	No
38.	Sometimes people succeed in taking advantage of me.	Yes	No
39.	I feel restless at times and cannot sit quiet for a very long time.	Yes	No
40.	I do not give up trying to complete my task.	Yes	No
41.	Nobody helps me without an ulterior motive.	Yes	No

42.	I find it hard to take a 'No' for an answer.	Yes	No
43.	I often need understanding friends to cheer me up.	Yes	No
44.	I am very free in expressing cordiality.	Yes	No
45.	I feel diffident when I talk to someone elder or more able.	Yes	No
46.	I think no one demand from me more than I can demand from others.	Yes	No
47.	I can stick to a tiresome task for a long time without someone from others.	Yes	No
48.	I dislike people who do not obey elders.	Yes	No
49.	I want someone to be with me when I do badly.	Yes	No
50.	I think that the country is leading for a disaster.	Yes	No

APPENDIX II

SELF ESTEEM PROFILE

Please read each statement carefully and mark how much you agree:

S. No.	QUESTION	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
1.	I am a person of worth at least equal to others					
2.	I feel that I have a number of good qualities.					
3.	I am able to do things as well as most other people.					
4.	I feel I do not have much to be proud of.					
5.	I have a positive attitude towards myself.					
6.	Sometimes I feel I am no good at all.					

APPENDIX III
SOCIAL COMPARISON PROFILE

Please read each statement carefully and mark how much you agree:

S. No.	QUESTION	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
1.	I always pay a lot of attention to how I do things compared with how others are doing.					
2.	If I want to learn more about something. I try to find out what others think about it.					
3.	I always like to know what others in a similar situation would do.					
4.	I often compare how many loved ones (friends, family members etc.) are doing with how others are doing.					
5.	If I want to find out how well I have done something. I compare what I have done with how others have done.					
6.	I often compare how I am doing socially (e.g. social skills, popularity) with other people.					
7.	I often like to talk with others about mutual opinion and experience.					
8.	I never consider my situation in life relative to that of other people.					
9.	I often compare myself with others with respect to what I have accomplished in life.					

Read each statement carefully and put a (√) mark with which you most agree:

1. When I am successful in my plan/reaching goals, I like to compare myself with -

- (a) someone doing better than me []
- (b) someone like me []
- (c) someone worse than me []
- (d) with none []

2. When I fail in accomplishing my goal, I compare myself with -

- (a) someone doing better than me []
- (b) someone like me []
- (c) someone worse than me []
- (d) with none []

PERSONAL INFORMATION SHEET

Name: _____

Class: _____ Sex: _____

Father's educational
qualifications: _____

Occupation: _____

Mother's educational
qualifications: _____

Occupation: _____

Family income: _____