



CHAPTER - TWO

A BRIEF SURVEY OF RELATED LITERATURE

1. A BRIEF SURVEY OF RELATED LITERATURE

An explanation of research literature pertaining to academic achievement and personality reveals that there is a lot of research done in this area of which some of the researches are as follows:

Factors Affecting Mathematics Achievement

Achievement in mathematics has been studied in relation to a number of variables, both cognitive and affective.

- Studies in the past decades have confirmed that intelligence and socio-economic background are major contributors to mathematics achievement (Singh 1986, Nilima Kumari, 1984, Rajput 1981, Gakhas, 1981, Jabbar, 1981; Kabu, 1980;)
- Factors responsible for poor achievement and failure have also caught the attention of researchers.
- Mainka (1983), found that language mastery was an important factor in the acquisition of concepts in mathematics.
- Gakhas (1981) identified variables of the educational environment as responsible for the acquisition of mathematical concepts.

- Factors predominant among failures studied by Jain(1979) were mathematical background, attitudes towards maths & low motivation.
- Factors responsible for under achievement in mathematics have been some personality variables, namely, self-reliance, sense of personal freedom, feeling of belongingness with drawing tendencies, nervous symptoms, social skills, general anxiety and test anxiety, parental profession and parental education (Iyer, 1977).
- Personality variables were also studied by Som Sundram (1980) in relation to over and under achievement. Test anxiety, general anxiety and masculinity were negatively related to maths achievement. All personality variables except the sense of personal worth, sense of personal freedom, withdrawing tendencies and community relationships discriminate between over achievers and non-over achievers.
- Kaul's (1978) study found that high & low achievers in mathematics differed significantly on eight of Murray's needs. The low achiever in maths were more exhibitory, succorant, hetero sexual and aggrosexive. High intelligence, numeric abilities, abstract reasoning and adjustment were some of the characteristics of mathematical gifted children (Kaul, 1979. Kaul, 1980.).

2) In neutral class-room conditions, the achievement in mathematics was not affected by their achievement motivation.

3) The SES of the students affected the achievement of students in mathematics. The high SES group & the average SES group of students did not differ significantly on achievement in mathematics.

Achievement of high SES and low SES students in mathematics differed to give significant results on their achievement in mathematics.

2. Factors responsible for high and low achievement in mathematics

SINGH, B. conducted a study on high school students and the tools used were as follows:

- (i) An achievement test in mathematics developed by the investigator, Cattell's Culture Fair-Intelligence Test (CFIT), scale 3 (Form A + Form B), Samal's Vocational Interest Inventory (VII), Samal's Scale (SSESS), Minnesota Counseling Inventory (MCI) and Survey of the Study Habits and Attitudes (SSHA) form H.

The major findings were as follows:-

- (i) Achievement in mathematics was positively and significantly related with intelligence, SES,

study attitudes. But achievement in mathematics was not related with scientific interest mechanical interest. Interest in agriculture interest in business, social service art official activities, administrative activities, family relationship social relationship, emotional stability, conformity, adjustment, mood leadership and study habits.

- (ii) Regression analysis revealed that study habits and interest in agriculture were significantly correlated with achievement in mathematics.

3. KHAN, S. (1983) has worked on - A study of the personality characteristics of educationally backward pupils of High Secondary School of Lucknow district.

The objectives of the study were:

- (i) To discover the significant variables of personality responsible for low achievement and
- (ii) To find out the relationship between the variables.

Sample: The sample of the study consisted of 600 pupils (150 boys and 150 girls of age range 12 to 15 yrs.)

Tools: used were High School personality questionnaire

Findings:

- (i) Educationally backward pupils were more reserved detached and aloof, less intelligent, more emotionally unstable, more excitable and impatient, more assertive and aggressive more happy-go-lucky. Shy timid, tender-minded and sensitive more internally reflective, more insecure socially grouped dependent, uncontrolled and careless of social rules & tense over-wrought and frustrated
- (ii) The educationally backward pupils were more introvert, tenderminded and had more anxiety and poor adjustment.
- (iii) The girls were found to be a little warmer, more participating more emotional, having strong superego, more sensitive tender minded than boys who were found more dominating thick skinned happy-go-lucky, excitable, tense & surgent.
4. ✓ VERMA(1985) conducted a study on - Factors affecting academic achievement. A cross-cultural study of tribal and non-tribal students at Junior High School level in Uttar Pradesh.

- (iv) Students from the ST had a higher SES when compared to students from the SC & other castes.
- (v) There was no significant difference between tribal and other caste student as regards self-concept.
- (vi) The mean school adjustment score of the tribal group was significantly poorer than that of the non-tribal group. However there was no significant difference between the mean adjustment score of the ST student and other groups.

5. SULTANA, S. has worked on - A study of school achievement among adolescent children with working and non-working mothers.

The objectives of the study was to find out the answers of the following questions:-

- (i) Is there any difference in scholastic achievement among children of educated working mother and educated non-working mothers.
- (ii) Is there any difference in scholastic achievement among children of educated working mother and educated non-working mothers studying in English medium and Hindi medium school.

Tools: The scholastic achievement of the students was tested on standardized achievement test

Findings:

- (i) There was a significant difference in achievement in mathematics among children of working and non-working mothers. The children of nonworking mothers achieved more than those of working mothers.
- (ii) There was no difference in academic achievement among children of working and non-working mother studying in English or Hindi medium schools.

6. MISRA, M. (1986) Conducted a Study on - critical study of the Influence of SES on Academic achievement of Higher Secondary students in Rural and Urban area of Kanpur.

Objective: The influence of SES on academic achievement of rural and urban high school students.

Tools: Marks of high school examination were taken as the criterion for academic achievement.

Findings:

- (i) There was a positive relationship between SES and academic achievement of the students.
- (ii) There was a positive relationship between the intelligence test score and academic performance of the students.



- (iii) Intelligence positively affected academic performance of the student.
- (iv) The academic achievement of the rural student was lower than the achievement of the urban students.
- (v) The academic performance of girls was superior to the performance of boys.

7. (1) MEHROTRA, S. (1986) has worked on - A study of the relationship between, Intelligence, SES, anxiety, personality adjustment and academic achievement of higher school students.

The major findings were as follows:-

- (i) Both for the boys and girls there was inverse relationship between level of anxiety and academic achievement.
- (ii) Both for the boys and the girls there was positive relationship between socio-economic status of the family of the students and academic achievement.
- (iii) There was a positive relationship between intelligence and academic achievement.
- (iv) There was a positive relationship between level of intelligence and academic achievement.

(v) In general, the girls had a comparatively higher level of anxiety than the boys.

8. LALL, R. (1984) conducted a study on - Child Rearing attitudes, personal problems and personality factors as correlates of academic achievement.

Objectives:

- (i) To investigate the relationship among child rearing attitudes of parents (termed as parental attitude) Youth problems and personality factor such as locus of Central, reinforcement, anxiety extraversion and neuraticism.
- (ii) To study there relation with academic achievemen (termed as academic success)

Tools: Academic achievement was determined by mark obtained by students in the annual examination.

Findings:

- (i) Restrictive and protecting attitudes of parent were positively and significantly related to youth problems and anxiety.
- (ii) Restrictive attitudes of parents were negative and significantly related to internal locus of control and extraversion where as they we

positively and significantly related with powerful others, locus of control and neuroticism. Protecting attitude of parents were positively and significantly related to academic success of boys.

- (iii) Loving attitudes of parents were positively and significantly related to powerful - others, locus of control, extraversion and neuroticism.
- (iv) Academic success was negatively and significantly related to personal problems and sensitivity anxiety and neuroticism. Internal, powerful other and locus of control of reinforcement were not significantly related to academic success.
- (v) Boys more internally oriented and neurotic than girls, while girls were subjected to more restriction by parents and were more anxious than boys.

The major educational implication of the study is that it is helpful to teachers and others in understanding the problems of adolescent students, their personality and perception of parents' child-rearing attitude.

9. KAPOOR & RITA (1987) Conducted a study on Factors Responsible for high and low achievement at the

objectives: To findout the relationship between paren aspiration certain personality traits and sch achievement.

Tools: The school achievement of students taken i their aggregate scores attained by them in previous year examination.

Findings:

- (i) The total sample showed a positive correla between parents aspiration.
- (ii) The high aspiring parents showed signifi correlation between fathers' high aspirations the trait of dominance in boys.
- (iii) The low aspiring parents did not show significant correlation between aspiratiore parents and all variables taken for the study
- (iv) There was significant difference be aspiration of father & aspiration of mother the school achievement of children of low asp parents and middle aspiring parents.
- (v) There was significant difference in the tra guilt proneness of children belonging to groups of parents. where both father and n high aspiring and low aspiring.

- (vi) There was significant difference between the self-concept of children belonging to the group of parents where both father & mother were high aspiring and low aspiring.
- (vii) There was significant difference in the school achievement of children belonging to the gps of parents where father was low aspiring and mother was high aspiring and where both father and mother were low aspiring.

11. DOCTOR, Z.N. (1984) Conducted a study of classroom climate and the psyche of pupils and their achievement.

The objectives were:-

- (i) To find out the class-room climate and psyche scores of classes.
- (ii) To study the profiles of the class-room of high and low climate.
- (iii) To have an indepth study of teacher behaviour in classroom of high and low climate.
- (iv) To compare the master profile of the class rooms having high climate and low climate.
- (v) To study the sociograms of classes having high and

The major findings are as follows:-

- (i) Each class room had its own individuality. A class room with high class room climate had high pupils psyche.
- (ii) Class room climate had consistency with academic achievement.
- (iii) Academic achievement was highly dependent on 'independency of pupils'.
- (iv) Adjustment was closely linked with class-room trust and expectancy.
- (v) Class-room climate and pupils psyche were more connected with independency and dependency.
- (vi) Academic achievement was dependent on teachers and pupils behaviour, pupil's psyche and class room climate.
- (vii) From the climate-graph it was found that independency academic motivation, legitimacy etc the scores of most of the schools were less than the scores on other variables taken in the study

12. SARKAR U. (1983) Conducted a study on contribution of some home factors on children's scholastic achievement.

Tools:

(i) Culture Free Intelligence Test by Cattell's.

- (ii) Schaefer and Bell's parental attitude Research Instrument.
- (iii) Interview schedule to collect information on home environment and examination marks.

Findings:

- (i) The home variables such as educational environment, income, spatial environment, social background, provision of facilities and parent child relationship showed a significant difference between the high achievers and low achievers at .01 level.
- (ii) The child-rearing attitude of the mothers of the two groups showed a significant difference between the mothers of the high achievers and the low achievers at .01 level, indicating that the mothers of the two groups possessed different attitudes regarding child-rearing practices.
- (iii) The multiple correlation coefficient was 0.5.
- (iv) The multiple regression equation revealed that the contribution of parent child relationship to academic achievement was about 17% of social background about 7% and of educational environment about 4% the remaining five factors - income, spatial environment, provision of home making facilities

inactiveness, stedgyness, enthusiasm, needlessness and happy-go-lucky nature increased.

- (iii) As the girls come to VIII class, they become more warm-hearted outgoing, easy-going participating insightful, fast learning bright, undemonstrative tender minded, sensitive, emotionally less stable overactive, controlled, follow self image, tense frustrated and relaxed.

14. ✓ JAIN D.K. (1979) conducted a study on significant correlates of High School Failure mathematics and English.

The major findings are:

Factors that play a vital role in learning mathematics were intelligence, abstract reasoning numeric ability, mathematical background, knowledge of mathematical concepts, rules and principles, attitude towards mathematics, degree of motivation, study hours and test status and mathematics in the family.

15. GAKHAR S.C. (1981) Conducted a study on Identification of variables of educational environment related to the acquisition of mathematical concepts of

Findings:

- (i) Intelligence was significantly and positively related with the acquisition of mathematical concepts.
- (ii) Certain variables, namely, devoting more time study mathematics having the advantages additional help, interest in mathematics a gender did not significantly influence the acquisition of mathematical concepts by the students.
- (iii) The SES of the parents was significantly correlated with the students performance mathematics concept test.
- (iv) Father's income and parents education had positive effect, Teachers variables relating to the qualification class size, encouragement given the head to the teacher the use of the audio visual aids, feed back and total attitude score the teachers were found to be significantly influencing students performance on mathematics concept test.
- (v) Target size private boys, School, private coeducation schools and lesser teacher - pupil ratio were positively related with the acquisition