

CHAPTER II

REVIEW OF PREVIOUS RESEARCH

2.1 Home Factors

- (a) Socio-economic Status
- (b) Parent-child Relationships
- (c) Educational Climate

2.2 Institutional Factors

2.3 Individual Factors

- (a) Intelligence
- (b) Personality
 - Extraversion-Introversion
 - Neurotism
 - Anxiety
 - Persistence
 - Self-concept
- (c) Adjustment
- (d) Motivational Factors
 - Need for Achievement
 - Level of Aspiration
- (e) Interest
- (f) Attitude
- (g) Other Factors
 - Sociometric Status
 - Peer Group Attitudes and Values
 - Age
 - Caste
 - Linguistic Proficiency
 - Smoking

2.4 An Over-view of the Previous Research

CHAPTER

* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *

REVIEW OF PREVIOUS RESEARCH

The large number of failures and underachievement at the examinations and the consequential loss to the student, parent, teacher, administrator and the nation at large have attracted the attention of several researchers to find out as to why some students fail and some students succeed in the examinations. The search to identify the conditions that contribute to or hinder the academic achievement has revealed several factors. These factors may be divided broadly into three areas -

(1) Home factors, (2) Institutional factors (School or College), (3) Individual factors. A brief review of the factors is presented under the above three broad areas. In reviewing the literature the emphasis was on providing the trend of the results of the researchers rather than on giving the minor details of each and every study.

(1) Home Factors

The researches in this area are again divided into

(a) Socio-economic Status, (b) Parent-child relations such as Praise, Approval, Closeness to the child, family belongingness, domineering, over-restriction, punishment, babying, pressuring demands, ~~en~~ sharing of ideas, confidences, trusting, affectionate, home discipline, conflict on child rearing, parent-pupil agreement on vocational plans, sex role identification, etc.

(c) Educational climate such as reading habits of parents, parental attitude towards education, parental value on education, parental interest in the child's education, abnormal background, academic guidance available, language models, achievement press, physical amenities in the home, tuition, etc. The researches are reviewed under the above three headings.

(a) Socio-Economic Status

Abrahamson (1952), Ahluwalia and Gupta (1963), Ames (1943), Banerji (1961), Bear (1928), Bennur (1966), Campbell (1952), Chauncy (1929), Chitra (1968), Choppin (1968), Chopra (1966, 1969a), Choudhari (1963), Clark (1927), Collins and Douglass (1937), Coster (1959), De and Sinha (1968), Douvan (1956), Frankel (1960), Fraser (1959), Griffiths (1959), Garrison (1932), Gough (1946), Gupta and Kapoor (1969), Hollingshead (1949), Kemp (1955), Impellizzeri et al (1965), Jamuar (1963), Kamat and Deshmukh (1963), Kaur (1961), Knief and Stroud (1959), Milner (1951), Miner Betty (1968), Paibthraun (1963), Pavitran and Feroze (1964), Pierce and Brown (1960), Raina (1967), Raghavacharyulu (1957), Richaria (1952), Sharma (1969), Sharma (1961), Show (1943), Terman and Oden (1947), Varma et al (1966), Washburne (1959), Wiseman (1966) have reported positive relationship between socio-economic status and academic achievement.

The studies of Conklin (1940), Curry (1962), Myers (1952), Naidu and Aaron (1969), Nemzek (1940), Rao (1968), Sinha (1966), Watson (1965), have revealed that there is no relationship between socioeconomic status and academic achievement.

Derrick (1961) compared the environments in two districts, Dundee and Lancashire, in relation to success of girls in gaining entry to grammar schools and concluded that Parents' education was of slight importance in Lancashire and in Dundee it seemed an occasion to be negatively related to their childrens' success. Crawford (1929) with college students found that "economic advantage is by no means positively related to academic achievement, and, in fact, that the relationship which might be expected from the term "advantage" is actually reversed". French (1959) also reported that "unexpectedly, father's occupation and education showed little or no relationship to test scores". Gupta (1968) reported no relationship between mother's education or father's education and achievement of the children. He also found that except in a moderate intelligent group, significant relationship does not exist between income or occupation of the parents and achievement of the children. Kulkarni and Naidu, (1970) taking samples from Haryana, Gujarat and Central Schools found low positive correlation between socio-economic status and achievement only in the case of central schools. There was no clear cut trend to suggest relationship between education of parents and achieve-

ment of their children. Whereas occupational level of parents showed no relationship with achievement of their children, occupational group category showed relationship. Chopra (1967) found that father's occupation was positively related to achievement in English, Mathematics and science but the achievement in Hindi, Biology, and Art was relatively free from the influence of father's occupation.

Chauncy (1929) and Chopra (1966) have reported that positive relationship between socio-economic status and achievement holds good when the effect of I.Q. on achievement is controlled whereas Rao (1968), and Naidu and Aaron (1969) showed that such relationship does not hold good.

Socio-economic status is assessed on the basis of income of Parents (Gupta and Kapoor, 1960, De and Sinha , 1963., Kaur, 1961., Gupta, 1963., Fraser, 1950., Varma et al (1966)., Coster, (1959) of education of parents (Ahluwalia and Gupta, 1968), Impellizzeri et al, 1965., Pierce and Bowman, 1960., Terman & Oden, 1947., Clark, 1927., Kaur, 1961., Fraser, 1950., Griffiths, 1959), of occupation of parents (Ahluwalia and Gupta, 1968., Chopra, 1967., Chopra 1969 a; Impellizzeri, 1965; Frankel, 1960; Bear, 1928; Painsraun, 1963; Pavitran & Feroze, 1964; Griffiths, 1959; Radhavacharyulu 1957), of composite score of education, income and occupation of parents (Kuppuswamy, 1962). ^{Some researchers} have reported correlation coefficients and others have compared the high achievers with low achievers and found

that the parents of high achievers had higher education, income, occupational status, or socio-economic status than parents of low achievers. Though the findings are inconclusive, it appears that socio-economic status has some influence on academic achievement.

(b) Parent-Child Relationships

The studies of Hattwick and Stowell (1936), Kurtz and Swenson (1951), Levy (1933, 1943) have shown that deviations in parent-child relationships are related to deviations in school achievement. Parents of high achievers have been found to give their children more praise and approval (Rickard, 1954), to show more interest and understanding (Tibbets, 1955), to be closer to their children (Kimball, 1953), to make their children feel ^{el} more family 'belongingness' (Walsh, 1956), ^{to have children} who have identification with parents (Tibbets, 1955). On the other hand, parents of underachievers have been reported to be more domineering (Jones, 1955 and Kimball, 1953) overrestrictive ~~and~~ (Rickard, 1954) and to use more severe and frequent punishment (Conklin, 1940 and Kimball, 1953), Parents of underachievers have also been found more likely either to baby their youngsters or to push them excessively (Hattwick and Stowell, 1936), and to present to their youngsters either low or extremely high (pressuring) demands for achievement (Rickard, 1954). It was reported that the homes of underachievers ^{vs} ~~show~~ show more tension (Jones, 1955) and more parental disagreement

as to standards of behaviour expected of their youngsters (Tibbets, 1955). Morrow & Wilson (1961) found that parents of bright high achievers reportedly engage in more sharing of activities, ideas, and confidences; are more approving and trusting, affectionate, and encouraging (but not pressuring) with respect to achievement; are less restrictive and severe; and enjoy more acceptance of parental standards by their youngsters. It was found that underachievers' families do not show more over-protectiveness, more high-pressure for achievement, more parental disharmony, more irregularity of home routines, differences in goals for their youngsters, or differences in sociological factors such as parents' marital status, current occupation of either parent, or number and age of siblings.

d'Heurle, Mellinger and Haggard (1959) found positive relationship between achievement and parental 'overprotectiveness' and parental pressures toward achievement. Drews and Teaphan (1957) reported that mothers of high achievers were more authoritarian and restrictive in the treatment of their children than the mothers of low achievers. Pierce and Bowman (1960) found that high achieving boys had mothers who were democratic in attitudes toward them, whereas high-achieving girls had mothers who were authoritarian and controlling in attitudes. The study of Portland Public Schools (1959) has shown that the parents of high achievers tended to be somewhat less authoritarian and to have experienced fewer difficulties in bringing up their children. The parents of the high achievers

were also more supportive emotionally. Kimball (1952), Pierce (1961) reported that low achievers had negative relationship with the father.

Granlund and Knowles (1969) found association between underachievement and lack of sex-role identification as measured by the Bell Adjustment Inventory's Masculinity-Femininity Scale. Shaw and White (1965) reported that high achiever, but not ~~in~~^{the} low achiever, identifies with the like-sexed parent. It is also suggested that an appropriate sex-role identification is characteristic of achievers but not of underachievers. Walsh (1956) also found identification with parents is associated with achievement.

Nason (1954) found that Parent-Pupil agreement ~~as~~^{on} specific occupational plan or on college level aspiration is positively related to achievement. Norman and Davis (1957) found that discipline in the home is related to child's academic achievement. Mc Gillivray (1964) found a more punitive environment for the underachiever. Fleming's (1966) study has shown that interparental conflict on child rearing 1) is not related to achievement in Arithmetic, 2) is negatively related to reading achievement and I.Q., 3) is related in the case of boys and not in the case of girls.

It appears that parent-child relationships have their own role in contributing to academic achievement.

(c) Educational Climate

Fraser's study (1959) has revealed that achievement is related to ten items of home environment - (1) parents' education; (2) reading habits of parents and children, (3) Income, (4) occupation of father, (5) Family size, (6) Living-space, (7) Parents' attitudes to the education and further employment of the child, (8) Parental encouragement, (9) Abnormal home background and (10) General impression of the home background. Of these ten items, the three items which are mainly responsible for the higher correlation with school progress are abnormal background, income, and parents' attitude to the education and further occupation of the child. The correlations of these items, except father's occupation and abnormal background vary between .329 to .66. The correlation of achievement with father's occupation is established by analysis of covariance and that with abnormal background by means of graphs.

Dave (1963) related the following six aspects of home environment to the scores on a battery of achievement tests taken at the end of the fourth grade of the school.

1. Achievement Press
2. Language models in the home
3. Academic guidance provided in the home.
4. The stimulation provided in the home to explore various aspects of the larger environment.

5. The intellectual interests and activity in the home.
6. The work habits emphasized in the home.

The overall index of the home environment has a correlation of $+0.80$ with the total score on the entire achievement battery. Bloom held that "Dave's research demonstrates that it is what the parents do in the home rather than their status characteristics which are the powerful determiners in the home environment" (Bloom, 1964, p.124)

The 1964 National Survey of Parental attitudes and circumstances related to school and pupil characteristics also high lightened the importance of parental attitudes. The three broad categories of variables namely parental attitudes, home circumstances and school variables account for about two thirds of the total variation in achievement between schools and for about half of the total variation in achievement within schools. (Central Advisory Council for Education 1967, p.208). The variation in parental attitudes accounted more of the variation in children's school **achievement** than either the variation in home circumstances or the variation in schools. The specific aspects of home environment that related to achievement are (Central Advisory Council for Education, 1967, pp.215,221) Parental attitudes : Aspiration for child, literacy of home, parental interest in school work and progress.

Home circumstances : Physical amenities of home, number of dependent children, father's occupational group, father's education, mother's education.

The National Child Development study (1958 Cohort) (Central Advisory Council for Education, 1967, pp.530-531) has also found positive relationship between achievement and parental interest and father's occupation. The Manchester study by Wiseman (Central Advisory Council for Education, 1967, p.357) has shown that achievement is related to verminous children, cleanliness of home, freemeals, material needs, parental occupation, crime (family), free clothing, children's height, housing standard and crime (neighbourhood). Home literacy, parental attitude towards education, attitude to books and reading, toward school are important determiners of achievement. Disrupted home appeared to contribute negatively to achievement. Goldberg (1958) has also found that lack of family disruption through death, divorce is positively to achievement. Varma et al (1966) also found that emotional conditions in the home affect the achievement.

Campbell (1952), Floud, Halsey and Martin (1957) also found that Parental attitudes are related to achievement of their children. Malloy (1954, 1955) Sexton (1965), Trent et al (1965) have found that parents of high achievers had more positive attitudes than parents of low achievers. Pidgeon(1959) states that ' the most important factor bearing on the

educational progress of all those so far investigated was the attitude of the child's parents'. Wiseman also held that 'factors of parental attitude to education, to the school and to books are of far greater significance than social class and occupational level'. (Central Advisory Council for Education 1967, p.382). Parental encouragement (Carillo, 1957, Griffiths, 1959), Parental interest (Carillo, 1957, and Gowan, 1957) parental reinforcement (Weigand, 1957), and parental motivation (Gowan, 1957) are found to be positively related to achievement.

Gupta (1968) and Pillai (1965) found that provision of tuition in the home has positive effect on the children's achievement. Ahluwalia and Gupta (1968) found positive relationship between facilities for study in the home and achievement. Gupta (1968) found positive relationship between facilities and achievement in the case of moderate and low intelligent group and no relationship in the case of high intelligent group.

Griffiths (1926), and Londis (1954) found that academic achievement is inversely related to family size. Watson (1965), Myers (1952), Dyer (1945), reported no relationship, whereas Weitz and Wilkinson (1957) reported relationship between number of siblings and achievement. Watson (1965) reported relationship between birth order and achievement whereas Myers (1952) and Farley (1967) found no such relationship. Pierce and Bowman (1960) found that high achieving students came from families where they were the first-born or the only child more often

than did low achievers and small families produced proportionately more high achievers than did large families.

In regard to the position of factors related to achievement Bloom (1964, p.190) has summarized that the differences in school achievement are likely to be related to

1. Meaning which education comes to have for one's personal advancement and role in society.
2. Level of education of and value placed on education by the significant adults in the individual's life.
3. Extent to which school achievement is motivated and reinforced by parents or significant adults in the individual's life.

It appears that Parental attitude towards education, parental value on education, Parental interest in the education of the child, abnormal background, language models available in the home, encouragement for academic success, facilities available for studies are related to achievement.

2.2. Institutional Factors

The institutional factors include size of the class, size of the school, quality of building, methods of education, progressiveness, instructional factors, organizational and administrative factors, social and educational conditions, teachers' characteristics such as sex, marital status, experience, workload etc. and attendance of the students.

The researches in this area are reviewed here under :

When compared to work done in relating home environment to achievement, relatively much work has not been done in identifying the effect of school environment on achievement.

Mollenkopf and Melville (1955) found that the size of the average instructional class was one of the variables that added to the efficiency of prediction of achievement. Kemp (1955) found that the size of school and school morale (school atmosphere, children's manageability, play ground behaviour, regularity of attendance) are positively related to achievement whereas the size of class and quality of building are not related. Warburton's study (1964) has revealed that progressiveness (rating of the type of education provided in each school on a 'formal-free' scale, ranging from the extremely formal, rigid, and orthodox to the most informal, free and progressive, with a curriculum organized through activities related to the interests of the children), good school neighbourhood and good school building are positively related to achievement and that there is no relationship between ^{the} date of school building and achievement. The middle-sized classes have optimum attainment and the highest attainment is found in medium-sized schools (250-300). Progressive methods of education, good social background and good teaching conditions facilitate attainment.

The Manchester survey by Wiseman (Central Advisory Council for Education, 1967, p. 357) has shown that the school characteristics related to achievement are (a) appearance and sociability of the children, (2) attendance, (3) streaming, (4) children qualified for special school, (5) class size, (6) school size and (7) home work. Physical aspects of the school environment have a much greater importance than either the teachers or the organisation and policy (Central Advisory Council for Education, 1967, p. 367) . The school characteristics related to achievement, as found in the 1964 National Survey of Parental attitudes and circumstances related to school and pupil characteristics, are 1) teacher's sex, 2) ~~tea~~ teacher's marital status, 3) teacher's degree of responsibility, 4) teacher's total experience, 5) teacher's short courses, 6) teacher's long courses, 7) teaching work, 8) meetings (father available) and 9) continuity .(Central Advisory Council for Education, 1967, pp. 215, 221.) . ~~Lester~~ Lester (1953) found that high morale of the teacher leads to better achievement in the students.

The study by Pillai (1965) focuses on the school conditions that are related to scholastic achievement. In this study school is taken as a unit and it covers 1130 SSLC students in 24 high schools of Trivandrum District of Kerala State. The following three broad categories of factors, quantified on the basis of the weightages suggested by the teachers and lecturers, are related with average school marks obtained at the S.S.L.C. examination.

- (a) Instructional Factors or Teacher Factors :
- (1) Composition work
 - (2) Exercises and home work.
 - (3) Periodical tests
 - (4) Evaluation of tests
 - (5) Issue of progress reports.
 - (6) holding extra classes
 - (7) giving special ^eattention to examination subjects.
- (b) Non-instructional factors or organizational and administrative factors :
- (8) Laboratory facilities.
 - (9) Provision of audio-visual aids
 - (10) Library facilities
 - (11) Parental cooperation
 - (12) Keeping cumulative records
 - (13) awarding prizes and medals for academic distinction.
 - (14) nature of punishment
 - (15) facilities provided for sports and games
 - (16) Literary and other school associations
 - (17) Size of the class division in standard X
 - (18) Classroom accommodation for standard X
 - (19) Facilities provided for correction work by teachers.
 - (20) The number of qualified teachers in the school.
 - (21) frequency of the transfer of teachers
 - (22) Promotion criteria in lower standards.

(c) Environmental factors or social and educational conditions :

- (23) time taken to reach the school.
- (24) educational status of parents
- (25) availability of separate room for study.
- (26) study habits.
- (27) availability of tuition at home.
- (28) interest taken in films
- (29) provision for noon meals.
- (30) attitude towards the school .
- (31) attendance at school.

Though definite ^{plus} conclusion cannot be drawn with regard to effect of instructional factor (partial $r = .02$), it was found that environmental factor (partial $r = .65$) and a non-instructional factor (partial $r = .45$) are related to achievement and among the three the environmental factor is the important one. (p101). There was no interaction between instructional and environmental factors whereas there was interaction between non-instructional factors and instructional factors/ environmental factors. The effects of instruction and environment are more pronounced when the non-instructional score is good. The non-instructional score influences only when the environmental score of the school is average and it has no effect when the environmental score is poor. For the pupils from good environment the achievement is high irrespective of the quality of the non-instructional

factor and teaching (instructional factor) (Pillai, 1965, p. 107).

The studies of Burton (1945), Feingold (1928), Finch and Nemzeck (1935), Jones (1931), Sharma (1961), Turner (1927), and Reddy (1966) have established positive relationship between achievement and attendance. Douglas and Ross (1965) found that except in upper middle class, the achievement is affected by the amount of absence in all other social classes. Children who are consistently absent or who are often absent make low scores at eleven + selection examination.

The results indicate that size of the class, size of the school, quality of building, organisational and administrative factors, environmental factors including attendance have influence on achievement.

2.3 Individual Factors.

The individual factors cover psychological characteristics like a. Intelligence, b. personality- covering traits like Extraversion- Introversion, Neuroticism, Anxiety, Persistence, self-concept, C. Adjustment, d. Motivational factors - like Need for achievement, level of aspiration, e. Interest, f. Attitude and g. other factors - like sociometric status, Peer group attitudes and values, Study habits, Extra curricular activities, Age, Caste, Linguistic proficiency and smoking.

The results of the studies are presented hereunder:

(a) Intelligence :

Aimsworth (1967), Bhargava (1957), Bhojak (1961), Burt (1939), Cohler (1941), Deb (1969), Durblinger (1943), Eds and McCall (1933), Frost and Brandes (1956), Gupta and Kapoor (1969), Hartson and Sproy (1941), Hyday (1968), Jordan (1923), Kapoor (1961), Kemp (1955), Lennon (1950), Mac Phail (1925), Mc Clelland (1952), Mishra, Dash and Padhi (1960), Naidu and Aron (1969), Ormiston (1939), Parekh (1957), Parhi (1960), Raina (1967), Rao (1968), Richaria (1952), Rosengart^{er} (1965), Satsangi (1960), Sharma (1961), Shivaramayya (1947), Srivastava (1955), Sultana (1969), Tamhankar (1968), Thurstone (1925), Toops (1926), Varma et al (1966), have found positive relationship between intelligence and academic achievement.

On the other hand, studies of Cocking and Holy (1927), Gupta (1967), Muthayya (1965), O'Brien (1928), Rao (1967), and Young (1936) have reported no relationship between intelligence and achievement.

Dauglass, Kinney, Segel, 1934, Wagner and Garrett (1949) have reviewed the studies dealing with relationship between intelligence and achievement. The number of studies reviewed by them ranged from 39 to 442 and the median or mean value of the correlation was found to vary between .40 to .50 (quoted in Rao, 1967, p.15). Eysenck (1947) has reviewed 600 titles and concluded that the correlation varied between

.50 to .60. Louttit (1947), Pintner (1945), Aaron (1946), Froehlich and Hoyt (1959) have also reviewed the literature related to intelligence as a predictor of achievement. The correlations reported by them are : Louttit - .10 to .60; Pintner - .28 to .60 with few below .40; Aaron - .25 to .65 with a median of .48 (summary of 24 studies); Froehlich & Hoyt - .30 to .80 most of them falling at or nearer to .55. Of the 103 reported correlations between intelligence tests and college scholarship cited by Segel (1934), eighty-three were in the range .35 to .54; nine were smaller than .35; and only eleven of the 103 were greater than .54.

Harris (1940) pointed out that a multiple R of .6 or .7 was found between college grades (criterion) and secondary school grades, tests of intelligence and achievement or scholastic aptitude. Crawford & Burnham (1946) have observed that "typical correlations with school or college averages run between .40 to .50 is a rough though fair generalization". If we take .50 as the average correlation, twenty five percent of the variance in academic achievement is explained by intelligence, and seventy five percent unexplained variance is due to factors other than intelligence. While intelligence is certainly a significant factor in academic achievement, it is not the only factor and intelligence tests alone are not adequate to predict academic success.

(b) Personality :

The concept of personality is wide. Tests of personality include several traits or factors of personality. Under personality five dimensions namely Extraversion, - Introversion, Neuroticism, Anxiety, Persistence and Self-concept are included and the results are presented.

Extraversion - Introversion :

Furnham^{neaux} (1957,1962), Gibbins and Savage (1965), Lynn (1959), De^vadasan, (1966), Lynn and Gordon (1961), Savage (1962), Kline (1966), Broadbent (1958), Basu (1970), Harris (1931), Neel and Mathews (1935), Muthayya and Rajeswari (1969), Young (1936), and Callard and Goodfellow (1962) found extraversion to be negatively related to achievement. Savage (1966) Rushton (1963), Gupta (1967), Hallworth(1964), reported positive relationship between extroversion, and achievement. Holland (1960) found that high-achieving girls were usually extroverted; however, no such result was found for boys.

Jamuar (1961), Child, (1935), Young (1927), Eckert(1934) Super (1942), Neel and Mathews (1935), Evans and Wren (1942), Gough (1949), Lynn (1960), Altus (1943), and Lynn and Gordon (1961), have found positive relationship between introversion and achievement. Entwistle and Cunningham (1968) found positive relationship between introversion^{and}/achievement in the case.

of boys and positive relationship between extroversion and achievement in the case of girls. Furneaux (1962) found that neurotic introverts had the lowest failure rate and stable extrovers^e had highest failure rate in examination.

On the otherhand, Steen and Estabrooks (1928), Wren et al (1936) have found no relationship between introversion and achievement. Here also the results are not in agreement.

Neuroticism

Savage (1962,1966) Kline (1963), Frost (1963), Deb (1970), Wren et.al (1936), Rosen (1925), Bendig (1960) have found no relationships between neuroticism and achievement, whereas Gough(1953), Rushton (1966), Young (1927), Callard and Good-fellow (1962), Entwistle and Cunningham (1968), Mohanta (1965), Owens & Johnson (1949) found negative relationship. Furneaux (1957), Lynn (1959), Lynn and Gordon (1961), Eysenk (1957), Devdasan (1966) found positive relationship between achievement and neuroticism.

Drasgow (1958) and Savage (1962) held that mildly disturbed students do better than normal students and there is an optimum level of neuroticism for academic success and beyond that it will have detrimental effect on achievement. The results are not conclusive.

Anxiety

Sarason et.al (1958,1960), Rushton (1966), Castaneda et al (1956), McCandless & Castneda (1956), Palermo et al (1956), found that anxiety is negatively associated with achievement. Chanskey (1966) found no relationship in the case of boys but a low negative relationship in the case of girls. Holland (1960) found that only the high achieving girls were characterized by lack of tension and that the result was not valid for boys. Saranoff et al (1959) Burgess (1956) and Grooms and Endler (1960) found no relationship between anxiety and achievement.

Lynn (1957) reported that anxious children tend to be good readers. Spielberger (1962) found that anxiety facilitated the academic achievement of the higher ability group only. Malnig (1964) noted that anxiety was responsible for greater variability in academic performance, and that too for the high achieving group only. Sharma (1964) found positive relationship between achievement and anxiety. Results are inconsistent.

Persistence :

Gough (1953), Gupta and Kapoor (1969), Howell (1933), MacArthur (1955), Nichols and Holland (1963), Prouty (1955) and Ryans (1938, 1939), Thornton (1941), have found positive relationship between achievement and persistence. Oates(1929) Herriott(1929), Preston and Botel(1952) and Barch(1957) also held persistence to be related to achievement.

Self Concept

Combs (1964), Nason (1958), Taylor (1964), Bhatnagar (1966), Borislow (1962), Brookover (1962), Bruck and Bodwin (1932), Field, (1953), Fink (1962), Gough (1953), Impellizzeri et al (1965), Jones and Strowig (1963), Martin (1962), Portland Public Schools' Study (1959), Shivappa (1969), Irvin (1967) Brown (1960), and ¹⁵Wilson and Morrow (1962) have found that self concept is related to achievement and high achievers have higher self concept than low achievers. It is not known whether the low self concept is the cause of or result of low achievement.

(c) Adjustment :

Carroll and Jones (1944), Congdon (1943), Hibbler and Larson (1944), Houston and Marzolf (1944), Rao (1964), and Ahluwalia and Siddhu (1969) found that adjustment problems are associated with underachievement. Rao (1967), Popham and Moore (1960), Roberts (1962), Borrow (1943) and Christensen (1965⁵⁶) also found that high achievers differ from low achievers with regard to adjustment to school or college.

Heilbrun (1960), George and Nair (1963), Richmond (1929), Fisher (1943), Stagner (1933), Altus (1943), Hoyt and Norman (1954) found emotional maladjustment to be negatively related to achievement. Burgess (1956), Hallworth (1964), Berger and Sutker (1956), Jamun^v(1961) , found positive relationship

between emotional adjustment and achievement. Evans (1930), Sutton (1961) Griffiths (1945), Anderson and Spencer (1963) and Engel (1965) reported no relationship between emotional adjustment and achievement.

Hackett (1960), Gates (1946), Young (1933), Miller (1937) Jamuar (1961), found positive relationship between social adjustment and achievement whereas young, Drought and Bergstreser (1937) found no such relationship. Stenzler (1944), and Kuntz and Swenson (1951) also reported that high achievers are higher on social adjustment than average achievers.

Childers (1964) found that personal adjustment is associated with academic achievement.

(d) Motivational Factors :

Need for Achievement :

Muthayya (1964), McClelland et al (1953,1958), Morgan (1952), Irvin (1967), Gebhart and Hoyt (1958), Merrill and Murphy (1959), Todd et al (1962), Ricciuti et al (1955), Bendig (1958), Krug (1959), Morton (1959), Weiss et al (1959), Garrison & Scott (1962), Pierce and Bowman (1960), Caplehorn and Sutton (1965), Esther (1966), Litting and Yercaris (1963), Srivastava (1966), Singh (1965), Sinha (1970), Reiter (1964), Rosen (1956), Holland (1959), Gough (1953), Atkinson and Reitman (1953), Lewis (1941), Ricciuti (1955) and Mehta (1967)

have reported positive correlation between achievement and need for achievement. Mehta found correlations ranging from .085 to .179, between need for achievement and marks in English, Mathematics, Hindi, Science Group, Non-Science group and total marks.

Negative relationship was reported by Bhatnagar (1969), Lazarus et al (1957), Broverman et al (1960), Cole et al (1962), Sarason (1963). Chitra's study (1963) has revealed that under-achievers have low value for achievement. Atkinson and Litwin (1960), Demos and Spolyar (1961), Shaw (1961), Heilbrun (1962), Crandall et al (1962) and Longenecker (1962) found no relationship between need for achievement and achievement. Parrish and Rethlingshafer (1954), Backman (1964) reported that achievers and non-achievers did not differ on need for achievement. Again, the results are contradictory.

Level of aspiration

Red, Mccarry and Johnson (1962) used Cassell's level of aspiration test and found that aspiration scores had an insignificant relationship with achievement. Harrill (1962) measured level of aspiration through the self-estimates of academic performance and obtained a significant difference in the levels of aspiration of high and low achievers.

(e) Interest :

Datta (1952), Datta (1963), Campbell (1952) and Langlie (1960) found positive relationship between achievement in the subjects and interest in them, whereas Conklin (1940) reported that there is no difference in interest between high achievers and low achievers. Thompson (1964) reported that several components of the Kuder preference Record were correlated with the achievement index. Frankel (1960) found that the inventory revealed ~~distiant~~ differences in the interest patterns of the over- and under -achieving groups. Morgan (1952) reported some differences in the interest patterns of the two groups as revealed by Strong Vocational Interest Blank. Rust and Ryan (1954) observed that over-achievers differed from under-achievers on eleven scales and from normal achievers on twelve scales, nine of which were common with the previous eleven. Hewer (1956) and Burgess (1956) found no differentiating pattern of interests between over and under achieving groups.

(f) Attitude :

The studies of Wilson and Morrow (1962), Rao (1968), Impellizzeri et al (1965), Frankel (1960), Portland Public Schools (1959) have shown that attitudes toward school are associated with achievement. High achieving students were found to have positive attitudes toward school and satisfied

with the school programmes whereas underachievers had negative attitudes toward school. Varma et al (1966) reported that satisfaction with institution is positively related to achievement.

Kulkarni and Naidu (1970); Riar (1960), Singh (1960), Purandare (1961) found that positive attitudes toward school subjects contribute to better achievement in the subjects. Maheswari (1961) found that favourable attitude towards homework leads to better academic achievement. Perumal and Vistharan (1968) found positive relationship between scientific attitude and marks in Science and total marks in the case of IX class students.

(g) Other Factors

Sociometric Status :

The studies of Bonney(1943), Buswell (1953), Chopra (1969b) Feinberg (1953), Ohlsen and Dennis (1951), Forterfield and Schkicheing (1961), Sharma (1961), Langhlin (1954), Grossman & Wrighter (1948) have reported that sociometric status is positively associated with academic achievement. The correlations reported by Laughlin and Bonney are rather low. Lindzey and Urdon (1954), Gilliam and Gillam (1965) reported no relationship between social status among peers and achievement. It is not known whether high achievement contributes to peer

acceptance or peer acceptance contributes to high achievement. Both directions of influence appears to be possible.

Peer-group attitudes and Values :

The studies of Goldsen et al. (1960), Newcomb(1951), Suchman (1956), have shown that what students learn in a college is determined largely by the norms of behaviour and attitudes that prevail in the peer-groups to which they belong.

Study habits :

Alderman (1927), May (1923), and Young (1952) stressed the importance of study habits in academic achievement. Brown & Holtzman (1956) emphasised the role of attitude towards study.

Ames (1943), Brown & Holtzman (1955), Holtzmann, Brown and Farquhar (1954), Champam (1959), Duncan and Duncan (1934), Freeman (1929), Gough (1949), Jamuar (1958), Chahbazi (1957), Prosser (1923), Raina (1967), Rao (1967), Rao (1969a, 1969b), Srivastava (1968), Varma et al (1960? Vogt (1929), Weinlan (1930) and White (1932), found positive relationship between study habits and achievement. Nortow (1959) got the study habits rated by teachers and students themselves and found the teachers' ratings poor predictor and students' ratings good predictor of achievement.

Successful students had better study habits, proper budgeting of time and poor achievers had poor and inadequate study habits and less preparation. Dave (1959) reported that high achievers follow pre-designed study-schedule, study longer hours at a stretch, study topics again and again, revise notes and courses, are regular in doing home work, read 'general' as well as 'course' books, are interested in intellectual activities. Wilson and Morrow (1962) held that most high achievers do their home work regularly, whereas most under achievers 'good off' to a moderate or great extent. Strangely Rao (1963) found low negative relationship between achievement and study habits.

On the other hand, the studies of Ahmann et al (1958) Alexander and Woodruff (1940), Michael et al (1957), and Wren and Humber (1941) have shown that study habits are not related to achievement in high achievers and low achievers do not differ in study habits. Williamson (1935) had reported that after a particular minimum level academic achievement do not increase with number of hours of study. Here also the results are conflicting to each other.

Extra curricular activities :

Thompson (1927), Knox and Davis (1929), Monroe (1929), reported that athletics ranked higher scholastically than non-athletics. Bear (1923), Hutchinson (1929), Crawford (1923),

Gerberich(1941), Owens and Johnson (1949), Dubey (1962), and Varma et al (1966), reported that participation in extra curricular activities has detrimental effect on studies and non-athletics had higher achievement than athletics. Eckert (1935) found that superior students take less active part in these activities. Bajwa (1961) has reported that participation in sports does not have any marked effect on achievement, The correlations between the time spent in extracurricular activities and achievement reported by Patel (1959) and Sharma (1959) have not been found to be significantly high.

When the nature of extra curricular activities is same as that of academic pursuits, then these activities may contribute positively to academic achievement, otherwise, participation in these activities may stand in the way of fuller utilisation of abilities and time and may adversely affect the achievement. Duff and Siegel (1960) have observed that participation in these activities and underachievement may both be symptomatic of low academic drive.

Age :

Auluck and Gupta (1963), Bear (1928), Ecert (1934), Januar (1963), and Norman et al (1962) have found negative relationship between age and achievement ^{i.e.} ~~is~~ achievers were significantly younger than non-achievers. Dwyer (1939), found negative relationship upto 21 years and positive trend beyond that. Choppin (1969) reported positive relationship between age and achievement. The studies of Gupta (1963) and Raina (1967) reported no relationship between age and achievement. Choppin held that it has

not been possible to say much about the effect on achievement of being younger or older than the class average and frequently this is difficult to distinguish from the effect of length of schooling.

Caste:

Gupta (1968) has reported no relationship between achievement and caste, whereas Ahluwalia and Gupta (1969) have reported that high achievers belong to high castes.

Linguistic Proficiency :

Varma et al (1966) Srivastava (1966), Chatterji and Mukerjee (1969) found positive relationship between proficiency in English and achievement in other subjects.

Smoking :

Hervey (1907), Mataruzzo and Saslow (1960), Meyland (1910), Pblaum (1965) and Pumroy (1967) have reported negative relationship between smoking and achievement is non-smokers are high on academic achievement than smokers. But Srivastava and Agarwal (1969) have found that at Intermediate level smoking contributes to achievement negatively and at Post-graduate level heavy smokers received higher grades than light - or non-smokers. Probably smoking may help them to reduce tension, relax in social situations and concentrate on academic work.

2.4 An Overview of the Previous Research

Vast amount of research has been done to identify the factors related to achievement. Yet, the results are inconclusive and generalisations become rather difficult. What remains to be known is much greater than what is known about the contributive factors to achievement and what ~~ch~~ contributes to success in schools and colleges remains a research question still.

For every researcher who claims that a particular variable is related to achievement, there is another researcher who claims just the opposite. As Gowan (1965 P91) puts it "the problem appears more complex than was first indicated, and contradictory and unexpected findings have muddied the waters". The results are inconclusive due to several reasons such as (1) variations in the criterion of achievement chosen and used in the studies, (2) use of tools which are not valid and reliable, (3) Inadequate and heterogeneous samples used in the research, (4), Lack of control of the other variables related to achievement, (5) Lack of precision in defining the predictors and criterion variables, (6) Improper application of tests developed on altogether different settings, (7) Inadequate statistical designs applied, (8) variations in test administration, (9) tendency on the part of testees to give

socially desirable answers, (10) variations in tests used for measuring in same variable and (11) variations in system of examination for assessment of achievement in examiners' bias, mode of question papers, nature of questions etc.

There seems to be a little agreement with regard to intelligence as a predictor of achievement. As pointed out by Crawford and Burnham (1946), the criterion variance explained by intelligence may not exceed 25 percent. Hence the search to identify non-intellectual factors related to achievement started and brought to light several personality factors. Reviewing the results of five studies wherein culture fair test of intelligence, scale 2, High School Personality Questionnaire (HSPQ) and School Motivation Analysis Test (SMAT) are used for measuring intelligence, Personality and motivational factors of high school students, Cattell, Sealy and Sweney (1964, p.292) conclude that "one-quarter of the variance of achievement is associated with abilities, one-quarter with personality difference, one-quarter with dynamic interest differences, and the remaining quarter with influences and accidents outside the individual". Of late in India, there has been an increasing interest in the field of achievement motivation. The study by National Council of Educational Research and Training (Mehta, 1967) has revealed that the need for achievement (n_{Ach}) is related to achievement

The studies of Fraser (1959), Dave (1963), Central Advisory Council for Education (1967, pp. 208, 215, 221, 357, 530, 531) high light the importance of home environment for academic success at elementary or secondary school stage. Parental value on education and academic achievement, Parental encouragement in the educational process of the child, educational facilities available for children, in the home, absence of emotional climate (lack of worries) in the home besides socio-economic status (Parental education or income or occupation) seem to be ~~the~~ some of the elements in the home environment that contribute to achievement. The studies of MollenKopt and Melville (1955), Kemp (1955), Warburton (1964), Pillai (1965) and the National Survey of Parental attitudes and circumstances related to school and Pupil characteristics done by Central Advisory Council for Education, (1967, pp. 357, 367, 215, 221) point out the importance of school environment for achievement.

Most of the studies reviewed are ~~related~~ to achievement at the Secondary or elementary school stage. Relatively less studies related to achievement at the college stage are available. Reviewing the research related to achievement, Mehdi (1965), observes "greater part of differences in academic achievement of college students is still largely unaccounted ^{caused} for" by the available prognostic tests. In Indian context,

studies related to college achievement are very limited. Buch (1972, p.93) points out "Though a large number of studies in the areas of correlates of academic achievement have been undertaken at high school stage, there are only two studies at the college stage ~~in~~ addition to the one by Sinha."

Though intelligence, personality, ~~have~~^{ome} environment ^{and} need for achievement appear to be important correlates of academic achievement at the high school or elementary school stage, how important they are at the college stage is not clearly known. Therefore, it appears, there is need to study how these variables are related to achievement at the college stage and the present study is an attempt in this direction.

In the next chapter, the problem, purpose, hypothesis, limitations etc. are explained.

..