CHAPTER II

REVIEW OF RELATED LITERATURE

INTRODUCTION

To understand and appreciate the various aspects of correlation of academic achievement of students with their locus of control, failure tolerance and test anxiety, it is essential to review critically the various studies made in the field. The review gives the researcher an understanding of the previous work and the data used by them. The number of researches carried out in the field of anxiety and achievement indicate their importance in education. Numerous researches were carried out in and out of an Indian situation. In this chapter an attempt has been made to examine and review some of the studies that are relevant to the present topic under investigation. This study is purely exploratory in nature. The studies have been categorized in the following sequence to arrive at a clear picture.
STUDIES ON LOCUS OF CONTROL

Graves (1916) predicted and found differences among the Indians, Children of Spanish American heritage and Whites in an isolated bureacurtric community. As he expected, the Indians are most external, the Spanish Americans in the Middle and Whites more internal. The implication is for direct cultural teaching of internal-external attitudes.

Garrett (1955) studied the psychological aspects of physical disability and found that the disabled persons more frequently exhibit maladjusted behaviours than normal persons. Problems were reported in the areas of social status, self-concept and self-acceptance among disabled.

Seeman (1962) found that internals show greater tendency to attend to and recall material immediately present in the environments.

Gore and Rotter (1963) suggested that internals are more likely to take over action to effect social change than one externals.

Bordin et.al (1963) found that vocationally mature individuals are not only mature in occupational attitudes and orientations, but also in other personality characteristics. Thus vocational maturity seems to be a reflection of general personality development.

Katkovsky and Crandall (1965) have developed a test that distinguishes between the internal who takes responsibility primarily for his success(I+) and the internal who blames himself for his failures (I-).
Crandall *et al.* (1965) found that locus of control for failure and for success may relatively be independent from each and that may afford the prediction of specified events which the others do not.

Rotter (1966) examined that internal versus external control of reinforcement (I-E) refers to the extent to which an individual feels that he has control over the reinforcements that occur relative to his behaviour. He reported in his original monograph that internals actively resist being conditioned or manipulated.

Davis and Pahres (1967) found that internals are superior to externals in actively seeking information relevant to problem solution.

Lipp *et al.* (1968) found out that physically handicapped persons were highly defensive and showed more slow response in accepting their disability.

Mac Donald Hall (1971) found that physically handicapped persons with internal-locus of control have less pessimistic attitudes compared with external-locus of control individuals.

Brown and Gordon (1971) involved internals and externals in an ambiguous task situation - a task in which the relationship between the subject's choices and his ultimate success was not easily determined. The internal working to discover a best way moves away the ambiguity much faster than does the external who picks and chooses randomly.
Gold Berg (1972) hypothesized that internals and externals would differ significantly in perception of locus of interpersonal control with externals showing a greater tendency to believe that others are interfering with their achievement of goals. The sample was 120 undergraduates (60 internals and 60 externals determined by the I-E scale). The predicted hypothesis was not supported in the experimental situation.

Synder and Larson (1972) found that externals were more accepting of extensive personality descriptions derived from minimal test data than were internals.

Davis and Davis (1972) investigated internal-external control and attribution of responsibility for success and failure using Rotter's I-E scale and administered to 80 male undergraduates in one study and 100 female undergraduates in the second study. In both studies it was found that internals showed a greater tendency to blame themselves for failure than externals. The two groups did not differ in talking personal credit for success.

Hjille (1973) found in dealing with the problems worker externally controlled subjects (high powerless) used significantly more coercive power (e.g. threat of deduction of points, threat of firing) than did internally controlled subjects (low powerless). In addition, internals relied more on personal persuasive power than did externals. These results were explained in terms of differential expectancy of successful influence by internals and externals.
Leverson (1973) differentiated between different kinds of externality, also noted that belief in control by powerful others may be associated with the kinds of parental control that are different from those associated with belief in chance.

Kilpatrick et. al (1974) revealed in their demonstration that internals maintain their mood of "vigorousness", exuberance, and high energy in the face of what must be continuously uncertain and arousing circumstances.

Steger, Simmons, William and Levels Sleven (1974) studied the accuracy of prediction of own results performances as a function of locus of control. The results indicated that internals were more accurate predictions of their own academic performance than externals.

Gilmor and Minton (1974) conducted a study on internals versus externals, attribution of task performances as a function of locus of control, initial confidence and failure outcome. Internals were significantly more internal in their attribution for success than were externals. Under failure the opposite trend was found.

Jersone (1974) propounded that there was a significant correlation between the female's, internal and external score and achievement. The main sample did not indicate any such significant correlation.
Lefcourt, Hogg and Sordoni (1975) found that internals were more comfortable as indicated by the frequency of fidgets, when working in isolation than when "feeling observed" by a video camera operating behind a mirror. In direct reverse, externals were found to fidget considerably more often when alone than when observation was made salient.

Wortman (1975) discovered that when subjects knew beforehand (expectancy) what they hoped to obtain, they perceived themselves as having more control over the outcome.

Tolar, Brannigan and Murphy (1976) studied psychological distance, future time perspective and internal-external expectancy. Some support for the predicted relationship between psychological closeness and an extended future time perspective was found. The marked sex differences on the future events test suggest that psychological distance has different meanings for the scores.

Mohan Mathew (1972) made an attempt to find out whether pupils with body defect and without body defects differ with regard to inferiority feelings, among 100 normal children and 100 defective children. Results showed that the mean inferiority scores of the normal pupils were found to be lower than that of body-defect group.

A study was conducted by Malley (1975) to seek an understanding of how the physically disabled perceive their native status and to learn more about the relationship, between perceived social rejection and self evaluation.
It was found that perceived social rejections seem to vary according to disability type and as function of such variables as disability accommodation.

**Carl R. Anderson (1982)** in his research, examined the relationship between managerial locus of control, perceived stress, coping behaviour (task Vs. emotion centred) and performance. Internals were found to perceive less stress, employ more task-centred coping behaviours and employ few emotion-centred coping behaviours than externals. Successful internals became more internals, whereas unsuccessful externals became more externals.

**Saikar S.K. and Ganguli S. (1982)** compared 20 orthopaedically disabled and 20 normal, males aged 20 - 30 years. Results showed that the orthopaedically disabled had higher neuroticism and insecurity feelings when compared to normals.

**Gon et al (1983)** conducted a study on the locus of control in 25 handicapped and 25 nonhandicapped males and 25 handicapped and 25 nonhandicapped females were matched for age, education and income and administered the 11-item version of Rotter’s Internal - External Locus of Control Scale. Data indicate that handicapped females did not differ significantly from nonhandicapped males. Handicapped males were also found not to differ significantly from nonhandicapped males. All showed trends toward internal locus of control, with the handicapped displaying a slightly greater trend. Results are discussed in terms of social stereotyping and status-determining issues.
Bernaralli et. al (1983) in their study, examined the relationship between I-E locus of control, career maturity and occupational information seeking. Results indicated that locus of control significantly correlated with career maturity. It was also found that career maturity correlated significantly with occupational information seeking.

Maureen (1983) conducted a research in investigating the relationship between locus of control and academic achievement. The result indicated that locus of control and academic achievement are positively related and more internal beliefs are associated with greater academic achievement. The results tended to be stronger for adolescents than for adults or children. Also, the relation was more substantial among males than among females. Stronger effects are associated with specific locus of control measures and with standardized achievement and intelligence tests.

Ramteke B.S. & Mrinal, N.R. (1984) examined the use of defense mechanisms in 20 physically normal males, and 20 physically normal females. The Defense Mechanism Inventory, which provides clusters labeled Turning Against Object (TAO), Turning Against Self (TAS), Projection (PRO), Principalization (PRN), and Reversal (REV), was administered to all SS. Physically normal males were found to use TAO significantly more than handicapped males, while handicapped males used TAS and REV more often. Physically normal males were also higher on TAO than were physically normal females. Physically normal males showed equal preference to each cluster of defense mechanisms.
Denga and Daniel I. (1984) examined the relationship between locus of control (LOC) and their occupation choice behaviour among 200 male high school students, by asking subjects to complete Rotters I-E locus of control scale and the motivation for occupational preference scale. Findings indicate that internal locus of control subjects were intrinsically influenced to choose their occupations, while external locus of control individuals were extrinsically influenced. It is possible that external locus of control individuals are passively dependent on external factors such as chance and good fortune to influence their occupational choice.

Singh and Tej B. (1984) administered locus of control scale to 50 male and 15 female visually impaired adults and the age, sex and education of the respondents were matched with each other. Results showed that locus of control did not differ significantly in the 2 groups but non congenitally blind subjects were less internal and differed from their sighted counterparts, because it leads them to curse fate for their disability.

Kessel et.al (1985) reported in his research study that chronic illness or physical disability need a sense of mastery, need to develop social skills among peers and achieve a positive image. A programme was designed to assess the locus of control, self-image, family environment and family dynamics among the chronically ill or disabled and the normals. After giving this programme, the severely handicapped showed significant increase in internal locus of control and change was found in the normals. Both groups showed significant improvement in body-image.
Gregory James et al (1987) examined the 26,142 American 12th graders for whom survey data from the National High School and beyond study were complete, 353 identified themselves as having orthopaedic handicaps (OHs). Data on these SS were compared to those on their nonorthopaedically handicapped (NOH) peers. OH students had a higher incidence of other impairments. Black youngsters were underrepresented in the orthopaedically handicapped cohort. Academically, the orthopaedically handicapped and non orthopaedically handicapped groups fared equally well, although the orthopaedically handicapped SS evidenced certain difficulties in self-esteem, locus of control and school/work orientation.

STUDIES OF FAILURE TOLERANCE

SCHOOL FAILURE TOLERANCE

School failure represents non-performance of what is normal, expected or required in the school context. The non-performance causes a tension in individuals. Some individuals may face boldly the failure or the non-performance of the required. Some may fear about the non-performance of what is required. It can be said that the behaviour of bothering much about the failure constitutes fear of failure. The act of the bothering least about the failure can be termed as failure tolerance.

Fear of failure and failure tolerance are the two ends of the spectrum of failure. As the fear of failure increases the ‘failure tolerance’ decreases and vice versa.
Research by McClelland and his associates (1969) yielded evidence suggesting that there are two recognizable aspects of achievement motivation, hope of success and fear of failure. One is an approach motive involving anticipation of reward and the other an avoidance motive involving anticipation of punishment.

Fear of failure evidenced in need of achievement situations where some subjects reacted to the aroused treatments with a sense of fear. This observation was used in the development of the concept of fear of failure by several researchers, who conceptualized the construct in their own way. Atkinson (1969) conceived fear of failure as a disposition to inhibit one's achievements striving on penalty of pain, the avoidance motive inhibiting achievement orientation in order to avoid possible failures is a multiplicative function of the motive to avoid failure, the possibility of failure and the dis-incentive value of failure.

Birney and Others (1969) combined with both Atkinson's and Heckhausen's concepts of fear of failure compensating for the limitations in these concepts through the relevant studies conducted in India and abroad regarding failure tolerance will be in a better position to investigate the problem by framing appropriate hypotheses, planning suitable tools and techniques, collecting appropriate data and analyzing the data with theoretical perspective. A resume of the related literature and the connected studies are given below.
The problem of dealing with and educating the students who have no failure tolerance has bothered the teacher and the parent since time immemorial. Philosophers, Physicians and Teachers have explained this problem in their own way in regard to its cause and treatment.

The problem has gained vast dimensions. The number of students who are not having failure tolerance has increased making the problem doubly intense and difficult. But inspite of these difficulties the work of investigating systematically the cause of fear of failure assessing the remedies as advocated by various workers in the field has received momentum during the last decade limitations in these concepts.

Birney and others view fear of failure as situation oriented, whereas Atkinson conceives it as task oriented. What Birney and others understand by fear of failure is that pupil differ in the degree to which they fear the three possible consequences of an achievement outcome, viz devaluation of the self-estimate, non-ego punishment and social devaluation. Three corresponding defences develop in reaction to the three possible anticipations about the outcome of the act; defence against the loss in self estimate, defense against punishment and defence against loss in social value. Therefore, for some people the fear may be directed at the lowering of their worth in the eyes of the others and skill for others to the loss of reward that is associated with non-attainment of the goal.
Achievement and Tendency to avoid Failure

McClelland and his associates (1969) stressed that adequate understanding of achievement behaviour would have to include failure motivation as well as achievement motivation.

Gould (1938) has made a similar suggestion when she pointed out that individuals with strong needs to achieve may also have an intense fear of failure.

The motive to avoid failure, functions to steer an individual away from achievement related activities, because they produce a tendency to avoid or inhibit actions which might lead to failure.

The Tendency to Achieve Success

It is assumed that the motive to achieve success which the individual carries about with him from one situation to another, combines multiplicatively with two specific situational influences, the strength of expectancy or probability of success (ps) and incentive value of success at a particular activity (IS) to produce a tendency to approach success is overtly expressed in the directing magnitude and persistence of achievement oriented performance. In otherwords, the strength of motivation to achieve or tendency to approach success (ms) through performance of certain action may be represented as below.
The first variable motive to achieve success is a relatively general and stable characteristic of the person which is present in any behaviour situation. But the other two variables PS and IS depend upon the individual’s past experience in specific situations that are similar to the one he now confronts. These variables change as the individual moves about from one life situation to another.

Sears (1942) states that there are many names for this learned drive, pride, craving for superiority, ego, impulse, self-esteem, self-approval, self-assertion. These terms represent different terminological terms but are not fundamentally different concepts. Common to all is the notion that the feeling of success depends on the gratification of the drive and failure results in frustration. This suggests that the experimental operations which will satiate and arouse the drive depends upon success and failure must be in relation to some different goal which the subjects have set for themselves.

Clifford Margaret M (1988) examined the validity of the school failure tolerance scale and investigated developmental patterns and sex differences in children’s academic risk-taking and tolerance for failure. 233, 4th, 5th and 6th graders were given the school failure tolerance scale and a chance to select and work 12 of 80-90 problems of varying difficulty, in each of 3 content areas; mathematics, spelling, and vocabulary. The school failure tolerance scale reliably predicted the difficulty level chosen by students at all grade levels and in all content areas. Students at all levels choose problems considerably below their ability levels. This low risk-taking tendency increased markedly with grade level. Students choose problems resulting in mean
absolute success of between 77 and 92\%, levels far in excess of the 50\% level theoretically associated with optimum motivation.

_Margaret Clifford et al (1990)_ studied academic risk taking in 94 male and 101 female 4th graders from Taiwan. SS 101 female 6th graders and 99 male and 107 female 8th graders from Taiwan. SS were given a self-report measure of tolerance for school failure as well as a quantitative and spatial judgement risk-taking task with variable payoffs (response value increased with item difficulty). As predicted, risk taking as defined by item difficulty increased with development. Also consistent with prediction, SS obtained significantly lower accuracy scores (implying higher risk) on the less familiar spatial task than on the quantitative task. Failure tolerance decreased significantly with grade in the rural school only and was higher for boys than for girls. Results are explained in terms of self-enhancement vs self-assessment goals, metacognitive skills and psychological reactance.

**STUDIES ON TEST ANXIETY**

Throughout the history of education, one can find that classroom tests have been the chief vehicle for evaluating the school performance of students. Yet the specific and/or general effects of tests and test like situations on students had not been extensively explored till recently. One of the earliest pioneer studies in this area was conducted by **C.H. Brown** in 1938. The results of this investigation demonstrated that tension is often present in the class-room, especially during test situations and further this tension can be measure by the questionnaire method. An additional step in the direction of
measuring anxiety occurred in the early fifties with the publication of the Taylor Scale of Manifest anxiety for adults.

In general, in an achievement situation, the attention of the high test anxiety group is diverted towards task irrelevant responses and the performance of the high test anxiety group is likely to be lower than the low test anxiety groups. Mandler (1952) when making comments on Sarason's (1972) paper on test anxiety makes the following assumptions for the better performance of low anxious subject tells himself that the appropriate in a test situation consists of observing his own behaviour of examining his failures, of remaining about his response and his emotional reaction of thinking about standards set by himself or by the performance of others.

Hence the low anxiety subjects perform better in an achievement oriented tasks. Although the effect of anxiety on easy tasks have been consistent the general result has been that anxiety does have a debilitating effect on complex learning.

Lucas (1952) and Montague (1953) found out that the performance of low anxiety subjects increased relatively to high anxiety subjects as the degree of complexity and the competing responses increased.

Speilberger and Smith (1966) found out that the effects of anxiety were dependent on the serial position effect. In the middle of the test where there are many competing response, high anxiety produces lower performance than low anxiety.
Armentrout (1965) found out that high anxiety children performed better under a right reinforcer condition than under a buzzer condition while reinforcement either made no difference for low anxiety subjects or the relation was reversed.

Philips, B.N. Martin and Mayers (1972) were discussing the effect of anxiety of learning concluded that though the effects on anxiety have been consistent the general results have been that the anxiety does have a debilitating effect on complex learning.

In a study on the effect of anxiety on easy and difficult designs Speillberger (1966) used a series of nine geometric designs where the subjects to copy each design with a forty seconds time limit. This was followed by an interpolated task for six minutes after which the subjects were asked to produce as many of the design they could remember. It was found that performance of high anxiety subject was inferior to that of low anxiety subject for more difficult designs.

The examination threat that is present in a situation is likely to inhibit the performance of high anxious subjects. But under certain types of personality threatening conditions even all utilisation may be so impaired high anxiety subjects profit from them.
Sarason (1972) reports a study where there were 12 subjects in each cell defined by two levels of test anxiety i.e., high and low and five conditions like experimental condition, reassurance conditions, motivating task-oriented condition, achievement condition and task-oriented condition. He reports that while the two anxiety groups did not differ under the neutral conditions, the low was significantly superior to the test anxiety group under achievement oriented condition. The results for reassurance has shown that subjects of high anxiety are superior to low test anxiety subjects under an anxiety alloying condition. Motivating task orienting condition, compared to other conditions favoured both high and low subjects in a neutral condition was analysed by Sarason (1961) in an experiment. The subjects were college students and the task required the serial learning of dissoluble words low in meaningfulness. The subject who did the experiment under neutral condition was simply given the instructions. In addition to the instructions the subjects who worked under the achievement oriented condition were told that the task was an intelligence test for measured their ability. While in the neutral condition the subjects did not differ in such under achievement orienting condition the low test anxiety subjects were far better than high test anxiety subjects.

A few of the studies reviewed have shown that the performance of the low anxious subjects was found to be superior to the high anxious subjects in experimental tasks under achievement-oriented conditions. Since the examination determines the academic performance of the students which is highly achievement oriented life situation it is likely that high anxiety will have debilitating effect on performance.
The academic performance and emotional cognitive component of physiologically aroused was investigated by Morris and Liebert (1970) and it was concluded that the test anxiety was negatively related to academic performance. The "worry" of the cognitive component was found to be negatively related to examination grades.

Examination situation is found to be threatening in nature and hence is likely to have produced tension and that in turn affects the performance depending upon the anxiety and fear aroused in that situation. The study of students under stress was carried out by Mechanic (1962). He explored the behaviour of students who were taking examination for Ph.D. Prior to the examination, the pattern of work was irregular and all the students experienced some ups and downs. During the examination, the students' feeling was highly dependent upon how they perceived what they did in examination they had already taken. After the examination though they relaxed, the anxiety over the results increased to its most intense point during the day of the publication of the result. As tension and anxiety mounted students found themselves incapacitated for work.

McCandless and Patermo (1956) developed a children's form of the Taylor Scale of Manifest Anxiety. Three important studies by these investigators using the children's form appeared in the same issue of child development. Within the past year a high significant and provocative series of investigations opened new horizons for further study of anxiety in the class room situations. Moreover, the motivations for the present study was largely derived from the above mentioned report. Previously cited research seems to
indicate that one of the serious problems in the educational structure of American Society is the intense feeling of anxiety that is exhibited by many students in the class rooms through verbalization and other patterns of behaviour.

Mechanic (1958) who attempted to relieve student anxiety in examinations as the state being in a threatening situation from which one cannot immediately escape. Students doing an examination with more or less anxiety due to their uncertainty regarding the outcome for the test are coupled with their strong desire to achieve a good grade. During the course of the examination, they are almost certain to encounter questions that are ambiguous to them or difficult. Mechanic reasons that as students proceed with the examination, either anxiety aroused by failed items may influence their subsequent performance on the questions they encounter or it may lead to use Mailers term to frustration instigated behaviour rather than motivated problem solving (i.e.) good directed behaviour.

Sarason (1972) have designed a scale to measure attitudes and feelings of anxiety towards various testing situations. Sarason presents Hullian explanation of anxiety. Anxiety is considered as a learned drive with the characteristics of a strong stimulus, when anxiety has been learned as a response to situations involving intellectual achievement (e.g.) test situation. Sarason and his collaborators found that by manipulating the testing situation through introduction of statements of failure or success, test performance for high and low anxious students are differently affected. The effect of failure is to depress the performance of high anxious subjects as
compared to low anxious subjects. The results have since been duplicated in several other studies.

The impact of the anxiety was studied in Indian situation by Sinha (1970). Beer Singh and Pramod Kumar (1977) reached a similar conclusion. Negative relationship was found between anxiety and failure tolerance.

Gokulnathan (1978) found that though the mean academic performance of the low anxiety group was higher, the mean difference was not satisfactorily significant.

Chatterjee S. (1976) in his study upon the effect of sex urbanisation and caste on anxiety found that the female suffer more due to anxiety than males.

The following chapter deals with Problems and Hypotheses.