Chapter - III

Design of the Study
3.1 INTRODUCTION

The design of any kind of activities is the utmost priority to convert the dreamt job into its exact form. The researcher believes that the design of the study is the heart of any kind of scientific research where the ultimate planning for the investigation is shaped. Research design is comparable to the blue print, which the architect prepares before the bids are let and buildings commence. The initial draft proposal is subject to modification in the light of analysis by the student and his or her project adviser. The preparation of a research proposal or design is an important step in the research process. This provides a basis for the evaluation of the project and the investigators are assisted during their research work. McMillan and Schumacher (1997) argued that research design refers to the plan and structure of the investigation used to obtain evidence to answer research questions. The design describes the procedure for conducting the study, including when, from whom and under what condition the data will be obtained. Following on them, Terre Blanche and Durrheim (1999) indicates that a research design guides “the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”. They further added that a clear design strategy and nature of the plan of the strategy is the one that usually distinguishes research from other forms of investigations or studies. Consequently a research design should be able to fulfill the aims of the research.

Hence, the researcher, in this chapter, presents the scientific design for his study. In the starting section of this chapter, the researcher formulates the functional objectives, to conduct his present study, which demonstrate that the activities of this research would not, in fact, be generating new information rather to gather required
data from specific data – sources. In accordance with the traditional and predefined
designs given by the science of research methodology, the present research is an effort
to conduct it as a descriptive study. Therefore the researcher envisaged to collect data
from various data sources, to explore impact of the demarcated measures of the
variables on academic achievement of the adolescent learners. Therefore, survey
approach to research has been considered to be justified. Hence, the present
investigator has reasoned out to apply various principles of descriptive survey method
in educational research methodology as the undertaken problem pertains to the field
of education. In this ongoing chapter, the investigator constructively mentioned all the
required steps needed to define the design of his study.

3.2 OBJECTIVES OF THE STUDY

The following objectives are laid down by the researcher to conduct his proposed study:

❖ To construct and standardized Academic Achievement Test for the students of
class X under two different boards of secondary education.
❖ To construct and standardized Multi-dimensional Scale of Test Anxiety to find
out the levels of test anxiety of the students of class X under two different
boards of secondary education.
❖ To estimate the achievement motivation of students of class X under two
different boards of secondary education.
❖ To compare the achievement motivation of students of class X under two
different boards of secondary education.
❖ To estimate the relative effect of achievement motivation of students of class
X on their academic achievement.
❖ To estimate the test anxiety of students of class X under two different boards
of secondary education.
❖ To compare the test anxiety of students of class X under two different boards
of secondary education.
❖ To estimate the relative effect of test anxiety of students of class X on their
academic achievement.
❖ To estimate the mental health of students of class X under two different boards
of secondary education.
To compare the mental health of students of class X under two different boards of secondary education.

To estimate the relative effect of mental health of Students of class X on their academic achievement.

To estimate the inter-relationship among achievement motivation, test anxiety and mental health of students of class X with different levels of academic achievement under two different boards of secondary education.

To estimate the predictability and impacts of achievement motivation, test anxiety and mental health on academic achievement of students of class X under two different boards of secondary education.

To present the model equation for predicting academic achievement on the basis of the variations of achievement motivation, test anxiety and mental health of the students of class X under two different boards of secondary education.

3.3 SIGNIFICANCE OF THE STUDY

The present research is a humble effort to unveil the impacts of achievement motivation, test anxiety and mental health of the students, reading in secondary schools affiliated to the WBBSE and CISCE boards, on their academic achievement. In the yester years, education was primarily for learning. But today the main purpose of education is for earning (Bhatti, 1993). In this industrialized and globalized world, education has become highly commercial and academic excellence has gained through tough competitions. The status of every individual is highly depicted through their academic achievement. Hence, academic achievement of students is the prime concern to students, teachers, parents, academicians, and educational researchers also. This circumstance is declaring itself a lot about the significance of taking up the present investigation.

There are certain confounding factors which mask the effect of the innate potential and in turn, help as well as hamper the child's academic achievement in the course of his studentship. Achievement motivation and mental health, generally, help the students to achieve successfully in their course of study, whereas, test anxiety hinders them to do their job purposefully. In the present study, the researcher felt need to assess the impacts of the factors which could be responsible for this turmoil. It has been seen that achievement motivation, test anxiety and mental health of the child are
very radiant and influential factors that aid a child in academic excellence. Though, these are the major propelling forces that act on academic achievement of the students, a comprehensive, yet concise research work, focusing those closely related psychosocial variables in low academic achievement could not be located even in the world research scenario. Hence, much work needs to be done with reference to each variable and its interaction with each other, as suggested by the theories as well as the empirical findings of the earlier researchers.

A systemic viewpoint posits that these variables and academic problems exert reciprocal influences on each another, which, over time, can negatively affect the development of students as the future human resources and parents, and their environments. Regardless of perspective, a clear understanding of the impacts of achievement motivation, test anxiety and mental health on academic achievement will help the teachers, parents and educators to generate appropriate assessment, prevention, and intervention strategies for upholding the academic achievement of the students. The present study sought to further analyze the impacts of achievement motivation, test anxiety and mental health on academic achievement among the students studying under WBBSE and CISCE boards of secondary education. This study determined the prevalence of impacts of the selected variables and their three levels among students, for examination as researcher believed these would have critical impacts on academic achievement. In this regard, the study could confirm results obtained in Indian as well as in foreign studies about students’ academic achievement in relation to the impacts of the selected variables.

Thus, the study aims at a new perspective, with an earnest attempt to satisfy the need of presenting the impacts of the said factors in relation to the achievement of the secondary students under WBBSE and CISCE Boards of secondary education. Hope the findings of the study would equip the professionals with the information about the required strategies in alleviating the condition of achievement discrepancy between these two boards. However, this is a study, which is in its nascent stage but could be of use to various others who are related to the academic achievement of the pupils. Hence, the researcher aimed to make significant contributions, through this research, in the following areas:

- The present research is on the issue of the discrepancy in academic achievement of the students of secondary level under the State Board and the
Central Boards. Hence, it was supposed that the present investigation will be of very significant to the state education stakeholders.

- The results of the study will indicate variation of affiliating boards of secondary education in terms of the academic achievement of their students. The result will be useful for future education planning, selection of examination and evaluation criteria, curriculum development and effective classroom teaching at secondary school level.

- Indicating the impacts of Achievement Motivation, Test Anxiety and Mental Health on students’ academic achievement, the study will be helpful to the teachers of secondary schools in understanding the nature of the academic achievement of their learners.

- The present research has been made a significant contribution to the parents and guardians in estimating their child’s academic achievement and understanding its effective factors.

- The present research has been making a significant contribution of an Academic Achievement Scale for Science and Social Science in combined, of the Secondary Education under WBBSE and CISCE Board, in both Bengali and English mediums. Further researchers may use this tool.

- The present research has been making a significant contribution of Test Anxiety Questionnaire in Bengali and English version. Further researchers may use the tool.

- The result of the study will indicate the variation in the achievement of the students under the Secondary Education Boards, namely WBBSE and CISCE. The result may be used by the educators to reduce this type of variations.

- The result of the study will indicate the relation between Achievement Motivation, Academic Achievement; Test Anxiety and Academic Achievement and also Mental Health and Academic Achievement of the students of secondary schools.

- The present research will make a significant contribution to the secondary school teachers in shaping their teaching-learning environment motivating and healthful by exploring the relationship of Achievement Motivation, Test Anxiety, and Mental Health with Academic Achievement.
3.4 ASSUMPTIONS OF THE STUDY

All the scientific as well as humanistic researches take birth from some conclusive assumptions and grow up on the basis of those assumptions. The present researcher constituted the following assumptions to conduct his research study:

- Academic Achievements of the students can be measured with the help of a standardized test.
- Academic Achievements of the students can also be measured through teacher made test.
- Academic Achievement can be classified in terms of degrees or levels.
- Achievement Motivation expedites on the academic achievement of the students.
- Test Anxiety affects the academic achievement of the students.
- Mental Health has an impact on the achievement of the students.
- The Degrees or Levels of Achievement Motivation, Test Anxiety and Mental Health of the students of secondary education can be measured and classified by applying the respective standardized tests.

The present research is concerned about the above mentioned assumptions and has been done in respect of these assumptions.

3.5 VARIABLES SELECTED FOR THE STUDY

The present study was designed with the following variables:

A. **Independent variables:**
   - Achievement Motivation,
   - Test Anxiety and,
   - Mental Health.

B. **Dependent variable:**
   - Academic Achievement of the students.
3.6 NULL HYPOTHESES OF THE STUDY

The following null-hypotheses were constructed for the quantitative analysis of the data collected to make interpretations:

\( H_0^1: \) The impact of achievement motivation in terms of degrees on academic achievement of the students of class-X under two different boards of secondary education will not differ significantly.

\( H_0^2: \) The impact of test anxiety in terms of degrees on the academic achievement of the students of class-X under two different boards of secondary education will not differ significantly.

\( H_0^3: \) The impact of mental health in terms of degrees on the academic achievements of the students of class-X under two different boards of secondary education will not differ significantly.

\( H_0^4: \) The relationship between achievement motivation and test anxiety with respect of academic achievement of the students of class-X under two different boards of secondary education will not be significant.

\( H_0^5: \) The relationship between achievement motivation and mental health with respect of academic achievement of the students of class-X under two different boards of secondary education will not be significant.

\( H_0^6: \) The relationship between test anxiety and mental health with respect of academic achievement of the students of class-X under two different boards of secondary education will not be significant.

\( H_0^7: \) The relationship between achievement motivation, test anxiety and mental health with respect of academic achievement of the students of class-X under two different boards of secondary education will not be significant.
3.7 SCOPE AND DELIMITATION OF THE STUDY

3.7.1 Scope and Delimitation in terms of the Sample

3.7.1.1 Geographical Area

This type of study could be conducted on the Secondary schools affiliated to WBBSE and CISCE in different districts of West Bengal. But considering the numbers of CISCE schools situated in various Districts, the investigator, to make the study intensive, purposively selected only three districts, namely Malda, Uttar Dinajpur and Jalpaiguri, as the area of his research study. Only the Secondary (All the schools have Higher Secondary section) schools from urban and semi-urban areas of these districts were adopted for the study.

3.7.1.2 Schools

All the Secondary schools in the selected districts could be taken to conduct the study, but considering the scope of facilities and the nature of the research work, 12 Secondary Schools were selected for the study. Among the selected schools, there were six (6) schools affiliated to the board of CISCE and the rest six (6) schools were affiliated to the WBBSE board of secondary education.

3.7.1.3 Types of schools

All the selected schools are situated in the urban or semi-urban areas of the selected districts and, hence, all the eight schools, affiliated to WBBSE (Bengali Medium) and CISCE (English Medium), are of good quality in terms of the results of the Board Examination. In case of this research, all the selected CISCE affiliated schools are co-education institutions and, hence, the investigator selected the rest only from the co-education institutions affiliated to the WBBSE board. Hence, the research was also delimited in terms of the nature of the schools, i.e. Co-Education schools.

3.7.1.4 Class

The study was delimited to include only the students of class – X of the secondary schools affiliated to both of the Boards of Secondary Education adopted in the present study. They were selected for the try-out of Achievement Test as well as the for the data collection procedure through the administration of all the final and standardized tests used in the study.


### 3.7.1.5 Number of Students

The numbers of students as final sample group of the study were delimited to include only 480 students belonging to both the Boards of Secondary Education. Among the selected samples, 240 were from WBBSE and 240 were from CISCE Schools. The sample group was comprised of 240 Boy students and 240 Girl students from both of the boards. All the four tests, Achievement Motivation Test, Test Anxiety Test, Mental Health Test and Achievement Test were administered on these samples.

### 3.7.2 Scope and Delimitation in terms of the Areas of Content

The content areas of Achievement Test for secondary students were consisted of the questions from the disciplines of Science Group, including Mathematics, Physical Sciences and Biological Science, and Arts Group, including History and Geography, of the curricula defined by WBBSE and CISCE for their affiliated secondary schools. The areas of contents were selected only from the specified curricula for the students of Class – X. Only objective type questions were set by covering the three levels e.g. Knowledge, Understanding, and Application levels of cognitive domain as prescribed by Benjamin S. Bloom.

### 3.8 POPULATION AND SAMPLE

#### 3.8.1 The Area of the Study

The present investigation was conducted on the secondary schools affiliated to WBBSE and CISCE in different districts of West Bengal. To make the study intensive and fruitful, the investigator purposively selected only three districts, namely Malda, North Dinajpur and Jalpaiguri.

#### 3.8.2 Population

The populations of the study are the pupils of Class-X of the secondary schools within the selected three districts under West Bengal Board of Secondary Education (WBBSE) having Bengali as the medium of instruction and Council for the Indian School Certificate Examinations (CISCE) having English as the medium of instruction. The researcher considered Malda, Uttar Dinajpur and Jalpaiguri Districts for the selection of the sample as these districts have schools, of both the boards of secondary education, namely WBBSE and CISCE, in urban and semi-urban areas to represent students with different communities. These students also represent various
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socio-economic backgrounds. The samples, thus, adequately represented the population of Secondary and Higher Secondary Schools affiliated to WBBSE and CISCE in Malda, Uttar Dinajpur and Jalpaiguri Districts.

3.8.3 Sample

The systematic sampling procedure was adopted for the selection of representative sample for the study. Initially, the researcher prepared a list of Secondary Co-Education Schools, affiliated to both of the boards of secondary education, i.e. WBBSE and CISCE in the districts of Malda, Uttar Dinajpur and Jalpaiguri. The researcher randomly selected six WBBSE affiliated and six CISCE affiliated schools from the list. Three CISCE schools from Malda district, namely, St. Xavier's School, Emmanuel English School, and North Point English Academy, one from North Dinajpur, namely, The Scholar and two CISCE schools from Jalpaiguri district, namely, S. S. Model School and Sunshine School were selected for CISCE Board. The WBBSE schools were - Alal High School, C. R. K. M. High School and Haripur High School from Malda district, M. S. C. High School from N. Dinajpur and B. K. M. High School and L. B. S. S. B. H. High School. The researcher randomly selected twenty boy and twenty girl students from each and every schools and the total sample of the study was 480 students, of whom 240 were from WBBSE Schools and 240 were from CISCE Schools. Among the total samples, 240 were boys and 240 were girls. The Sampling design of the present study was as depicted in the Schematic Diagram (Figure 3.1) at next page.
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Figure 3.1 Schematic Diagram of Sampling Design

Here, ‘c’ represents the CISCE Board, ‘w’ represents WBBSE Board and ‘S’ represents the selected schools. Hence, ‘cS-1’ is the first school selected from CISCE Board. Similarly, ‘wS-6’ is the sixth school selected from WBBSE Board.
3.9 TOOLS USED IN THE STUDY

The following tools were used for collection of data in the study:

(i) Academic Achievement test prepared and standardised by the investigator.

(ii) Deo-Mohan Achievement Motivation Scale developed and standardised by Pratibha Deo and Asha Mohan (2002)\(^4\).

(iii) Multi-dimensional Scale of Test Anxiety developed and standardized by the investigator.

(iv) RCEB Mental Health Battery prepared and standardised by S. P. Anand (1996)\(^5\).

Figure 3.2 Schematic Diagram of the Tools Used in the Study

3.10 DEFINITION OF IMPORTANT TERMS

3.10.1 Academic Achievement

Academic Achievement implies ‘scholarly accomplishment’. The ‘Academic’ has been derived from the term ‘academy’. The meaning of the term academy is a school where special type’s instructions are imparted. Hence, achievement means one’s learning attainment, accomplishment and proficiency of performance. Academic achievement is the core of wider term ‘educational growth’ which means growth in all aspects. Academic achievement, generally, is defined as knowledge acquired and skills developed in school subjects, generally indicated by marks.
obtained in tests in an annual examination. Achievement behaviour may be defined as any action directed of gaining approval where public standards of excellence are applicable. Admittedly, achievement is a complex phenomenon that requires different approaches to understand and interpret the knowledge concerned with a subject. Merriam Webster Dictionary defines achievement as "the quality and quantity of a student's work."

Trow (1956) defined academic achievement as “knowledge attaining ability or degree of competence in school tasks usually measured by standardized tests and expressed in a grade or units based on pupils’ performance”.

Good (1959) refers to academic achievement as, “the knowledge attained or skills developed in the school subjects usually designed by test scores or marks assigned by the teacher”.

Academic achievement, is defined by Crow and Crow (1969), as the extent to which a learner is profiting from instructions in a given area of learning i.e., achievement is reflected by the extent to which skill and knowledge has been imparted to him.

Smith (1969) defined achievement as “task oriented behaviour that allows the Individual’s performance to be evaluated according to some internally or externally imposed criterion, that involves the individual in competing with others, or that otherwise involves some standard of excellence”.

Kohli (1975) defined academic achievement “as level of proficiency attained in academic work or as formally acquired knowledge in school subjects which is often represented by percentage of marks obtained by students in examinations”.

Spence and Helmreich (1983) mentioned academic achievement as “a task oriented behaviour that allows the individual’s performance to be evaluated according to some internally or externally imposed criterion, that involves the individual in competing with others, or that otherwise involves some standard of excellence”.

Rajamanickam and Vasanthal (1993) stated that academic achievement means achievement a student makes in school namely his marks in the examination, which is the criterion for the achievement of a student.

Steinberger (1993) opined that "Achievement encompasses student ability and performance; it is multidimensional; it is intricately related to human growth and cognitive, emotional, social, and physical development; it reflects the whole child; it
is not related to a single instance, but occurs across time and levels, through a student’s life”.

Torres (1994) argued that academic achievement in general refers to the scores obtained in the annual examination or refers to the degree or level of success or proficiency attained in some specific area, concerning scholastic or academic work. Academic Achievement is the attained ability or degree of competence in school tasks usually measured by standardized tests.

Academic achievement refers to particular learning in a particular setting which is defined by examination marks, teachers’ given grades and percentiles in academic subjects (Chowdhury and Pati, 1997).

Educationally, achievement was defined by Niemi (1999), as the mastering of major concepts and principles, important facts and propositions, skills, strategic knowledge and integration of knowledge.

In the Standards for test construction (APA, 1999), achievement is viewed, basically, as the competence a person has in an area of content. This competence is the result of many intellectual and non-intellectual variables. At the experimental level, achievement is referred to as acquisition, learning, or knowledge representation, sometimes depending on theoretical biases. Achievement is the word preferred in the educational or psychometrics fields, being sometimes characterized by the degree of inference required on the part of the student to give a response, and by the type of reference to a cognitive process made explicit in the measurement tool.

Algarabel & Dasi (2001) opined that achievement is the competence of a person in relation to a domain of knowledge. What can be externally observed is performance. The stated that to reach a specific level of performance it may be necessary to bring into play complex cognitive tools like strategies, heuristics or skills. No doubt that the end result and the type of means to reach it must be correlated, a fact often overlooked. A difficult problem can only be solved after a well-organized body of knowledge is consulted and the appropriate metacognitive skills are used to reach a solution.

Chaudury (2004) defined academic achievement in two terms. These are

a. Academic - It pertains to school subjects or to fields of liberal arts or to the sphere of ideas and abstraction, and
b. **Achievement** – It was denoted by knowledge attained or skills developed by pupils usually in the schools, measured by test scores or by marks assigned by teachers.

Metha, K. K. (2007) defined academic achievement as, “academic performance includes both curricular and co-curricular performance of the students. It indicates the learning outcome of the students. In class rooms students perform their potentials efficiently, as a result of it, learning takes place”. The learning outcome changes the behaviour pattern of the student through different subjects.

Gupta, M. et al. (2011) defined academic achievement as “the level of learning in a particular area of subject in terms of knowledge, understanding, skill and application usually evaluated by teachers in the form of test scores in their annual examination”.

Academic achievement of pupils refers to the knowledge attained and skills developed in the school subjects. In general, academic achievement means the achievement of pupils in the academic subjects. In the present research context, the researcher holds the scores obtained by the students of secondary education under WBBSE and CISCE boards in the Academic Achievement Scale on Secondary education curriculums (combined) as defined by the specified boards constructed and standardized by the investigator as the academic achievement scores of the students.

### 3.10.2 Achievement Motivation

According to Longman Dictionary of Psychology and Psychiatry, Achievement Motivation in general psychology is personal accomplishment, or attainment of goals set by the individuals or by society. In educational psychology, the term applies to a specified level of proficiency in academic work in general or in a specific skill such as reading or arithmetic.

Achievement motivation is “a desire to accomplish something difficult; to master, manipulate or organize objects, people or ideas; to do this rapidly and independently; to overcome obstacles and attain high standards; to excel one’s self; to rival and surpass others; to increase self-regard by successful exercise of talent” (Murray, 1938).

McClelland (1953) stated achievement as ‘the desire to do well not so much for the sake of social recognition or prestige but to attain an inner feeling of personal
accomplishment.’ For this psychologist, achievement motivation is an overall tendency to evaluate one's performance against standards of excellence to strive for successful performance and to expedients pressure contingent on for successful performance. Achievement motivation contributes to the satisfaction of the adolescents. Achievement motivation is the superhighway to development. According to this psychologist, “Achievement motivation is assumed to be one of the driving forces for the development of a nation and considered as a ‘mental virus’ which causes individuals to be competitive, hardworking having more persistence” (McClelland and Winter, 1969)26. Later, he added that, it is an urge to improve or "a kind of spontaneously recurring concern to do things better". They further added that "Achievement Motivation can be defined as a concern for excellence in performance as reflected in competition with the standards set by others or over unique accomplishment or long time involvement”.

Atkinson (1966)27 defined achievement motivation as the striving to increase one's on capacity or activities in which a stand of excellence is to apply and where the execution of such activities can either succeed or fail.

Flaganan (1967)28, in his review of research on achievement motivation, has pointed out that the basic motivating factors leading man to work long hours, under unsatisfactory conditions are closely related to the content of the job and are based on the feeling of accomplishment and growth with respect to value objectives.

According to Heckhausan (1967)29, “Achievement Motive is the striving to increase or keep as high as possible one’s own capability in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore, either success or fall.”

Mehta (1969)30 defined achievement motivation as “…a feeling of dissatisfaction with the present state of affairs and an urge to improve the life condition for oneself”.

Dweck & Elliott, (1983)31 denoted that achievement motivation consists of a varied and complex set of assumptions, assessments, predictions, inferences, values, standards, and affective reactions that may be irrational, inaccurate, and contradictory. (p. 644)

According to Spence & Helmerich (1983)32, achievement motivation is thought to arise from needs to pursue excellence, reach lofty goals, or succeed in
difficult tasks. It involves competing with others or against some internal or external standard.

Gill (1986)\textsuperscript{33} opined that “A person who has high levels of achievement motivation would have a tendency to strive for success, persist in the face of failure and experience pride in accomplishments”.

In this research, Achievement Motivation was defined by the researcher in terms of the total scores obtained by the individual students by responding the stimuli given in the Achievement Motivation Scale.

3.10.3 Test Anxiety

Test anxiety is a ubiquitous phenomenon, with some degree of evaluative anxiety being experienced by most people in modern society. The test anxiety construct has matured within a large cocoon of attention ever since its inception in the early 1950s. Although a number of researchers have studied the concept of test anxiety, many of the theoretical definitions they use to define their research vary. Since test anxiety is multidimensional in nature, no single theoretical perspective has been able to adequately account for its level of complexity.

One of the most commonly accepted definitions of test anxiety is the one stated by Spielberger (1972)\textsuperscript{34}, who was also a proponent of test anxiety as a situation-specific anxiety. He defined test anxiety as an “unpleasant state characterized by feelings of tension and apprehension, worrisome thoughts and the activation of the autonomic nervous system when an individual faces evaluative achievement-demanding situations”. Spielberger et al., (1978)\textsuperscript{35}, further added with the previous definition, that test anxiety is “individual differences in anxiety proneness in examination situations”.

Deffenbacher (1980)\textsuperscript{36} defined test anxiety as “a bi-dimensional construct consisting of an affective component (emotionality), and a cognitive component (worry), with the two components being positively correlated”.

Dusec (1980)\textsuperscript{37} opined that “Test anxiety is an unpleasant feeling or emotional state that has physiological and behavioral concomitants and that is experienced in formal testing or other evaluative situations”.

\textsuperscript{170}
Test anxiety refers to a “special case of general anxiety consisting of phenomenological, physiological, and behavioral responses” related to a fear of failure and to the “experience of evaluation or testing” (Sieber, 1980, p. 18).

Covington, Omelich, and Schwarzer (1986) claimed that anxiety worked as a mediator of performance “where the particular conditions of learning and evaluation are sufficiently threatening to disrupt test taking.

Test anxiety, as explained by Horwitz et al. (1986), refers to “a type of performance anxiety stemming from a fear of failure”.

Schwarzer et al. (1987) defined test anxiety as “an individual difference in the disposition to experience feelings of apprehension and worry cognitions in academic environments where performance of students is under evaluation”.

It is generally believed that test anxiety is a situation-specific anxiety that refers to “the anxiety states and worry conditions that are experienced during examinations” (Spielberger & Sarason, 1989).

Anxiety according to Ornstein and Carstensen (1991) is a general emotional reaction that develops in response to anticipation that something may occur in the future, such as a threatened embarrassment (failure in a course). When this emotional reaction occurs during examination or assessment, it is often referred to as test anxiety.

According to Barlow & Durand (1995), test anxiety refers to physiological, psychological, and behavioural responses that reflect or underpin apprehension about possible failure during a test or evaluative condition.

Test anxious students “perceive examinations as more dangerous or threatening and experience more intense levels of state anxiety when taking tests” (Spielberger & Vagg, 1995, p. 6).

Test Anxiety was defined by Zeidner, M. (1998) as “…the set of phenomenological, physiological, and behavioral responses that accompany concern about possible negative consequences or failure on an exam or similar evaluative situation…. Test anxious students are characterized by a particularly low threshold for anxiety in evaluative situations, tending to view evaluative situations, in general, and test situations in particular as personally threatening…. Test-anxious behavior is typically evoked when a person believes that her or his intellectual, motivational, and
social capabilities and capacities are taxed or exceeded by demands stemming from
the test situation”.

In describing the definition of test anxiety as a scientific construct, Pintrich &
Schunk (2002) well documented that the students who are oriented to avoid negative
judgments of their competence are clearly more anxious about tests and their
performance.

Test anxiety is labeled from a cognitive perspective—a negative psychological
emotion that students experience during formal testing or an evaluation (Cassady,
2004). The term includes disturbing thoughts, distracting emotions, preoccupied
feelings, or the fear of evaluation that one perceives while engaged in a test.

According to Cizek & Burg (2006), test anxiety is “a state of uneasiness,
apprehension or an intense fear resulting from the anticipation of a threatening event
and an exaggerated, internal feeling of fear that a person experiences with dread or
tension despite no real tangible threat existing”.

According to Toth (2008), test anxiety is “worry over frequent testing, which
may become a source of frustration for learners, as their proficiency is assessed while
it is being acquired”.

Test anxiety, thus, can be seen as a reaction-bound stress phenomenon on the
one hand, and a situation-bound stress reaction on the other. This reaction is evoked
when the student’s intellectual, motivational and social capabilities are taxed or
exceeded by demands stemming from the individual himself, from significant others,
or from the school environment. Hence the researcher considered the construct—test
anxiety as a multidimensional and measurable psychological construct and defined it
in terms of the scores students scored in Test Anxiety Test.

3.10.4 Mental Health

According to Johnston (1991), normal behaviour is a complex balance
between conscious and unconscious striving drives and feelings. The mind and the
body are so united that when one is affected the other also shows change. Mental
health can therefore be defined as the ability to adjust to new situations and to handle
personal problems without marked distress and still have enough energy to be a
constructive member of society.
The concept of ‘Mental health’ is as old as human beings. In ancient scriptures there are full of references to mental diseases and their treatments. The Atharvaveda, the Charaka Samhita, the Sushruta Samhita, and the Astanga Samgraha have described several diseases of the mind with specific methods of treatment. They have also given the concept of mental health and how to maintain and promote it.

Some of the psychologists in the west opined that a mentally healthy person is one who has a whole some balanced personality free from inconsistencies and nervous tensions discords and conflicts. Mental health of an individual depends on foundations of some basic factors, such as: a) hereditary factors, b) physical factors, c) fundamental social forces such as the home, the school, the neighbourhood and the country and d) the satisfaction of basic needs in the period of childhood.

Wallin (1949) explained that mental health is a simple, all inclusive independent quality of mind that can be easily attained by the conscious acceptance of certain belief or by the mechanical or wishful repetition of certain potent phrases or formulas of an all sufficient, all embracing cult or discipline called mental hygiene.

Thorpe (1950) defined mental health - (1) in terms of either negative or positive factors and (2) on a hierarchal basis from minimum to maximum level. From the negative point of view, mental health has reference to the absence of symptoms range along continue from feelings of inferiority or quite, through psychosomatic disorders and the psychosomatic, to the organic and functional psychoses. The mentally healthy individual is free from all such maladjustments. On the positive side mental health means satisfactory adjustment and adaptation to the requirements of group life.

Mental health is an important factor influencing individuals various behavior, activities, happiness and performance. Maslow and Mittelman (1951) have suggested, the adequate feeling of security, self-evaluation, spontaneity and emotionality bodily desires self-knowledge, life goals, emancipation from group and culture and abilities to contact with reality, to learn from experience to satisfy the requirement of group the criteria’s of normal mental health.

Boehm (1955) wrote, "Mental health is a condition and level of social functioning which is socially acceptable and personally satisfying" Mental health is the capacity of an individual to form harmonious adjustments to one’s social and physical environments.
Menninger (1955) defined mental health as the adjustment of human beings to the world and each other with a maximum of effectiveness and happiness. It is the ability to maintain even temper, an alert intelligence, socially considerate behavior and a happy disposition.

Jahoda (1958) argued that aspects of attitudes toward self, growth and development, self-actualization, integration of personality and mastery of the environment must be considered in judging whether a person is mentally healthy or not.

Ferguson, Fersing and Allen et al. (1965) stated that mental health is the ability to cope with one’s environment in such a way that one's instinctual drives are gratified. They considered that mental illness and mental health are two opposite ends of the continuum on which any individual can be placed depending on the soundness of his mind.

According to Jagdish and Shrivastva (1978) mental health is person’s ability to make positive evaluation to perceive the reality, to integrate the personality, autonomy, group oriented attitudes and environmental mastery.

Bhatia (1982) considered mental health as the ability to balance feelings, desires, ambitions and ideals in one’s daily living. It means the ability to face and accept the realities of life. It may also be understood as the behavioral characteristics of a person.

Moller (1987) stated “mental health refers to those conditions in a society leading to a situation where people in their individual capacities and in interaction with one another as members of groups and communities, are able to live lives of quality in all contexts of their existence and where the options for actualizing their potential are present.

According to Kumar (1992), mental health is an index which shows the extent to which the person has been able to meet his environmental demands – social, emotional or physical.

Mental health is defined by the World Health Organization (1951) as “…the capacity of an individual to form harmonious relations with others and to participate in or contribute constructively to the change in his/her social and physical environment”. In 2001, the Organization has included mental well-being in the definition of health. WHO famously defines health as “…a state of complete physical,
mental and social well-being and not merely the absence of disease or infirmity”. Three ideas central to the improvement of health follow from this definition – (i) Mental health is an integral part of health; (ii) Mental health is more than the absence of illness, and (iii) Mental health is intimately connected with physical health and behaviour. Mental health can be conceptualized without restricting its interpretation across cultures. WHO has proposed that mental health is “... a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”. In 2005, the Organization redefined the concept of mental health and exclaimed that "mental health has been defined variously by scholars from different cultures. Concepts of mental health include subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence, and self-actualization of one's intellectual and emotional potential, among others”. According to the Organization, mental health and physical health are interrelated.

According to Plug, Meyer, Louw and Gouws (1991), mental health is a condition of relative good adaptation which is accompanied by a feeling of satisfaction, a zest for life and the actualization of potential and skills as well as the absence of psychopathological conditions. This definition is in agreement with the definition of the World Health Organization’s definition of mental health.

According to Gerber, Nel and van Dyk (1998) mental health may be defined as a state in which an employee is well adjusted, has an accurate perception of reality and can adapt fairly well to the pressures and frustrations of life.

The Victoria Health Promotion Foundation (VicHealth - 1999) proposed a new definition of mental health as “the embodiment of social, emotional and spiritual well-being. It provides individuals with the vitality necessary for active living, to achieve goals and to interact with one another in ways that are respectful and just”.

Mental health refers to the individual's subjective feelings of well-being, optimism and mastery, the concepts of ‘resilience’, or the ability to deal with adversity, and the capacity to be able to form and maintain meaningful relationships (Lavikainen et al., 2000). Although the expression of these qualities will differ contextually and individually from culture to culture, the basic qualities remain the same.
Houghton Mifflin (2003)\textsuperscript{70} agreed that mental health can also be regarded as a state of emotional and psychological well-being in which an individual is able to use his or her cognitive and emotional capabilities, function in society, and meet the ordinary demands of everyday life. He also added that mental health can also be seen as a branch of medicine that deals with the achievement and maintenance of psychological well-being. In addition to the above definitions, he included a person’s overall emotional and psychological condition.

Merriam-Webster (2005)\textsuperscript{71} defines mental health as “a state of emotional and psychological well-being in which an individual is able to use his or her cognitive and emotional capabilities, function in society, and meet the ordinary demands of everyday life.”

Lakaski, C. (2008)\textsuperscript{72} defined mental health as “…the capacity of each and all of us to feel, think and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of culture, equity, social justice, interconnections and personal dignity”.

Townsend (2009)\textsuperscript{73} defines mental health as “the successful adaptation to stressors from the internal or external environment, evidenced by thoughts, feelings, and behaviors that are age-appropriate and congruent with local and cultural norms” (p. 14).

Beside the above definitions of mental health, the researcher, for his research purpose, defined it in terms of the total scores obtained by the individual samples on the RCEB Mental Health Scale applied to collect the mental health status of the secondary students.

3.10.5 Boards of Secondary Education

Before independence in India, there were English medium secondary schools which were affiliated to Cambridge University. In the post-independence period, affiliation of these schools was replaced by the Council for Indian School Certificate Examinations (CISCE). However, after the NPE, 1986, and Liberalization Policy 1990, International schools, which were affiliated to foreign Boards, started being established. The primary aim of setting international schools is to promote and impart international education both to the domestic and foreign students. However, many local students attend these international schools to obtain qualifications that can help
them get employment or higher education in foreign country with ease. Globalization has necessitated this for the aspiring candidates. International schooling allows children to become global citizens. These types of schools in India can be broadly classified into two categories. One category contains the list of schools that follow a national curriculum different from that of the country the school is located in. The most common international schools in India represent Education in United Kingdom or Education in the United States. The other category includes schools that adopt an international curriculum such as International Baccalaureate based in Geneva, Switzerland, not associated with any particular country and free national political educational agenda (targetstudy.com/international-schools-in-india.html). Thus, up to this period in India, schools are either government or government aided or private unaided. The private un-aided schools further are of two types, one the schools affiliated by CBSE or CISCE or State Board of Educations and second, the schools affiliated to a foreign Board. In India, the major curriculum bodies governing secondary education system are:

i. The State Government Boards of Secondary Education, in which the majority of Indian children are enrolled.

ii. The Central Board of Secondary Education (CBSE) board.


iv. The National Institute of Open Schooling (NIOS) board.

v. International schools affiliated to the International Baccalaureate Programme and/or the Cambridge International Examinations.

vi. Islamic Madrasah schools, whose boards are controlled by local state governments, or autonomous, or affiliated with Darul Uloom Deoband.


In West Bengal, the major affiliating boards of secondary education are West Bengal Board of Secondary Education, West Bengal Board of Madrasah Education, Rabindra Mukta Vidyalaya, Council for Indian School Certificate Examinations and Central Board of Secondary Education. Among these boards, the researcher found West Bengal Board of Secondary Education as the most active and accepted board for the education system of West Bengal. In considering the academic achievement of the students, the researcher found Council for Indian School Certificate Examinations as
the most significant board of secondary education in this state. Considering the
number of schools affiliated to the boards, it was found that the Council for Indian
School Certificate Examinations (323 Schools) has more number of schools in
comparison of Central Board of Secondary Education (171 Schools). Hence, the
investigator adopted West Bengal Board of Secondary Education and Council for
Indian School Certificate Examinations for his research purpose.

3.10.5.1 West Bengal Board of Secondary Education (WBBSE)

West Bengal Board of Secondary Education plays one of the most important
roles in administering and harmonizing the complete educational backdrop of the
State of West Bengal. The WBBSE was established in 1951 under an Act of the State
Legislature called the West Bengal Secondary Education Act of 1950. The Board was
inaugurated by the then Governor of West Bengal Dr. K. N. Katju on 3rd May 1951
and started functioning under the Chairmanship of Sri Apurba Kumar Chanda. This
board actually looks after proper organization of the 10th standard Board level
examination of the state. The special feature of the Board is that this is a West Bengal
government administered authority for proper administration of 10th standard
examination.

It is the Board’s duty to advise the State Govt. on all matters relating to
secondary education referred to it by the Govt. The Board has the power to direct,
supervise and control secondary education. This includes laying down the general
policy for secondary education, instituting the secondary as well as other
examinations, and administering the West Bengal Secondary Education Fund. The
10th standard examination is popularly known as the Madhyamik examination and
this examination gets a special priority among the examinees as well as their parents
because it is considered as the primary foundation stone for establishing a dream
career. A simple data will prove the importance of this examination. Every year
almost 750,000 students participate in this examination and not only in West Bengal,
in those entire places wherever schools affiliated to the board exist, this examination
is conducted by the West Bengal Board of Secondary Education.

Secondary Education in West Bengal is from standard - V to X (Junior High
or Upper Primary stage is from standard – V to VIII and High School stage is Class –
IX and X) and Class-XI and XII constitute the Higher Secondary Education in West
Bengal. In the present study, the researcher meant to indicate the WBBSE as the
affiliation and certification state body for secondary education in West Bengal. Hence, the WBBSE students was defined as those students who are getting their education from the schools affiliated to the WBBSE.

3.10.5.2 Council for Indian School Certificate Examinations (CISCE)

The Council has been constituted to secure suitable representation of governments responsible for schools in their states/territories; the Inter-State Board for Anglo-Indian Education; the Association of Indian Universities; the Association of Head of Anglo-Indian Schools, the Indian Public School Conference; the Association of Schools for the ISC Examination and eminent educationists. The objectives of the Council is educational, and includes the promotion of science, literature, the fine arts and the diffusion of useful knowledge by conducting school examination through the medium of English.

In 1952, an All India Certificate Examination Conference, was held under the Chairmanship of Maulana Abul Kalam Azad, Minister for Education, considered the replacement of the overseas Cambridge school Certificate Examination by an All India Examination. This set the agenda for the establishment of the Council. In October 1956 at the meeting of the Inter-State Board for Anglo-Indian Education, a proposal was adopted for the setting up of an Indian Council to administer the University of Cambridge, Local Examinations, Syndicate's Examination in India, and to advise the Syndicate on the best way to adapt its examination to the needs of the country. The inaugural meeting of the Council was held on 3rd November, 1958. In December 1967, the Council was registered as a Society under the Societies Registration Act, 1860. In 1973, the Council was listed, in the Delhi School Education Act 1973, to be recognized by the Ministry of Education as the only non-Governmental Secondary Education Board in India and a body conducting "public" examinations. The Council is composed of representatives from Anglo-Indian Schools, other CISCE Board examining institutions and state institutions. Committees, including the Curricular Committee report their findings to the General Council for approval.

The Council for the Indian School Certificate Examinations is committed to serving the nation's children, through high quality educational endeavours, empowering them to contribute towards a humane, just and pluralistic society,
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promoting introspective living, by creating exciting learning opportunities, with a commitment to excellence.

The Council for the Indian School Certificate Examination conducts three examinations, namely, the Indian Certificate of Secondary Education (ICSE - Year 10); The Indian School Certificate (ISC - Year 12) and the Certificate in Vocational Education (CVE - Year 12). In the present research, the researcher defined CISCE students in terms of the affiliation and certification body or Board of Education. The CISCE students are those who are getting their secondary education from those English medium schools which are affiliated to the Board of CISCE.

References


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