CHAPTER 3
Methodology

Rationale of the study

Review of literature has indicated that problems related to school are considered as a major issue of concern with adolescents. In Indian society the continuous pressure to perform well is very high. Adolescents in India have a competitive attitude as well as a very strong will to gain academic brilliance. These adolescents are in continuous pressure from parents and themselves to perform well academically. Various studies have indicated that students mention school demands as one of the major reason of stress. These results indicate that while exams, scores are considered very significant. Students think that it is difficult to achieve those grades which are considered as satisfactory.

Research conducted on Indian students highlighted a strong relation between harmful effects like too much stress and emphasis on academic achievement. Research in this field has so far focused on academic stress with respect to life events and coping strategies in general. However coping strategies are not only affected by situational factors but also by the impact of individual personality traits. Secondly, the focus of the existing literature has been on the negative aspect of stress and coping.

The present study took into consideration the positive aspect of personality and inter personnel relationships in understanding the phenomena of academic stress. Positive variables such as optimism, resilience, self efficacy and attachment
are seen to enhancing students well being by buffering the effect of stress along with increasing the use of positive coping and involvement in healthy behaviour.

Since there is an acute paucity of research findings relating to positive personality and interpersonal factors to academic stress in adolescents especially in Indian context it occurred to this investigator to undertake a study on resilience, optimism, self efficacy and attachment in relation to academic stress in adolescents. This study will give new insight into planning intervention strategies and mitigating the effect of academic stress.

**Aims**

1. To investigate the relationship between Optimism and Academic Stress.
2. To study the relationship between Resilience and Academic Stress.
3. To explore the relationship between Self Efficacy and Academic Stress.
4. To investigate the relationship between Attachment and Academic Stress.

**Hypotheses**

To fulfill the above objectives the following hypotheses were formulated:

H 1: Academic Stress will be negatively correlated with Optimism

H 2: There will be a negative correlation between Academic Stress and Resilience

H 3: Academic Stress will be inversely correlated with Self Efficacy

H 4: Academic Stress will be negatively correlated with Attachment

H 5: The four measures of the study will significantly contribute to predict academic stress
Sample of the study

The sample of the study consisted of 300 senior school students (both boys and girls) drawn from public, private and missionary schools affiliated to Central Board of Secondary Education (CBSE) in the Jaipur city. Data was collected on the basis of following criteria of inclusion and exclusion.

Criteria for Inclusion

a) Age group was between 16yrs to 18yrs.
b) Only students from grade XI and XII were considered.
c) Students only from science stream were considered.
d) Students from co-educational schools were considered.
e) Students belonging to middle and upper middle class were contacted.

Criteria for Exclusion

a) Students studying in non-recognized schools and government schools.
b) Students studying in boards other than CBSE.
c) Students suffering from psychological ailments and physical disabilities.
d) Drop outs of previous years.

Design of the study

Design of study was Correlational Design. A correlational design helps in identifying that the two variables are correlated or not, which means variation in one variable result in increase or decrease in the other variable.
Measures of study

- **Life Orientation Test Revised (LOT-R) (Scheier, Carver & Bridges, 1994)**

  The original Life Orientation Test was developed by Scheier and Carver (1985), this test was revised by Scheier, Carver and Bridges in 1994 as Life Orientation Test Revised. This scale was revised to remove 2 items from the scale, which were dealing with the coping style rather than positive expectations for future outcome. Life Orientation Test Revised was designed to identify individual’s level of optimism and pessimism. This scale has been used in research that focuses on various aspects of optimism and pessimism. The original scale had 12 items in which 4 positive worded, 4 negative worded and 4 filler items whereas Life Orientation Test Revised has 10 items, 3 positive worded, 3 negative worded and 4 filler items.

  The test-retest reliability of Life Orientation Test Revised was $r = 0.68$ for 4 weeks, $r = 0.60$ for 12 months, $r = 0.56$ for 24 months, $r = 0.79$ for 28 months. Using Cronbach’s alpha = 0.78 for internal reliability and the test-retest reliability is at
sufficient level for unidimensional scoring. As there is overlapping of items between Life Orientation Test and Life Orientation Test Revised, the correlation between the two measures was as high as 0.95 (Scheier, Carner and Bridges, 1994). Life Orientation Test Revised has sufficient construct and predictive validity.

Scoring was done by totaling the scores of 6 items of the scale. Remaining 4 items are filler items which are not scored revised scale.

- **Resilience Scale (RS – 14) (Wagnild, 2009)**

RS-14 was developed by Wagnild in 2009. It is a self-report questionnaire which has fourteen items and focuses on measuring personality characteristics or coping resources that enhances individual’s adaptation. This scale has been used in various researches, focusing on resilience in variety of population like older adults, Adolescents and graduate students RS-14 is a 7 point Likert type scale having 14 items. RS-14 is a concise version of Resilience Scale which contains 25 items. RS-14 takes half time to complete as compared to RS.

The internal consistency of RS was indicated between 0.79 to 0.91 (Wagnild, 2009) where as test-retest was indicated between 0.67 and 0.84 with interval of 1, 3 and 4 months and after that another 4 months. RS-14 was found to be strongly correlated with original RS i.e. $r = 0.97$ and the internal consistency of RS-14 was 0.93 (alpha coefficient). The test-retest reliability and convergent validity was found very high among various researches.

For scoring purposes responses were taken on 7 points likert type scale. The scores were calculated by totaling the responses of all the 14 items of the scale. It is important to note that there is no reverse scoring.
• **General Self Efficacy Scale (Schwarzer & Jerusalem, 1995)**

General Self Efficacy Scale was designed by Schwarzer and Jerusalem in 1995. This scale was designed to analyze general sense of perceived self efficacy along with predicting coping with day to day problems as well as adapting after facing various types of stressful situations. Self efficacy is considered as positive resistance resource factor. In this scale 10 items are included to analyze this construct of self efficacy. Self efficacy is useful in clinical practice and behavior change. This scale is created for adult population as well as adolescents; children below 12 years of age are not included. This scale is a self report scale.

The Cronbach’s alpha ranged from point 0.76 to 0.90. This scale has sufficient criterion related validity. Responses were taken on 4 point scale.

The scores were calculated by totaling the scores of all the 10 items which will range from 10 to 40.

• **The Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1989)**

The Inventory of Parent and Peer Attachment was developed by Armsden and Greenberg in 1989. This scale was created to measure adolescent’s understanding about positive and negative side of their relationship with their parents and friends especially how much people act as a source of psychological security. The theory behind this scale is attachment theory. Three major areas that are measured through this scale: degree of mutual trust, quality of communication and extent of anger and alienation. This is a self report scale having 5 point likert type response format. Scale contains 25 items for mother, 25 items for father and 25 items for peer.
The 3 weeks test-retest reliability for the sample of 27 was 0.93 for parent sub scale and 0.86 for peers sub scale. The revised version has internal consistency (Cronbach’s alpha) are: mother 0.87, father 0.89 and peer 0.92. The scale has strong concurrent validity.

Scoring was done by adding all the scores of 25 items of each sub scale. The total attachment score is calculated by adding up all scores of 3 sub scales. For parents sub scale 10 items have reverse scoring whereas for peer sub scale reverse scoring is done for 8 items.

- **Academic Expectation Stress Inventory (AESI) (Ang & Huan, 2006)**

  Academic Expectation Stress Inventory was designed by Ang and Huan in 2006. It is basically a self report questionnaire designed for students. Scale measures stress of students regarding their academics. Main reasons of stress can be: expectation of teacher/parent and expectation of self. Scale contains 9 items.

  Internal consistency was calculated by Cronbach’s coefficient alpha. The Cronbach’s alpha of 9 items score was 0.89. The internal consistency of expectations of parents/teachers (5 items, alpha = 0.85) and internal consistency of expectations of self (4 items, alpha = 0.84). These Cronbach’s alpha estimates seem sufficient for basic research purpose.

  The two weeks test retest reliability coefficients for complete Academic Expectation Stress Inventory was 0.85. Further the two week test retest reliability for parents/teachers and expectations of self were 0.79 and 0.77 respectively. For all the items of Academic expectation stress inventory the coefficient alphas, the subscale expectations of parents/teachers, and the subscale expectations of self were as
Methodology

follows at Time 1: .83, .77, and .74, respectively. At Time 2, the coefficient alphas were .90, .86, and .84, respectively. The total reliability seems sufficient for basic research function. The scale also has adequate convergent validity.

For scoring purpose the responses were taken on five point scale. Scoring was done by summing up scores of all the items. There was no reverse scoring.

Procedure

The study was conducted in two steps. In the first step permission was taken from authorities of various schools in Jaipur city. Based on the criteria of inclusion and exclusion students were selected.

In the second step, set of questionnaire was given to the selected students. All the tests in the set were paper- pencil self report measures. Students were asked to read the instruction and give their responses on likert type scale. The tests were administered in a group setting and order of administration was random.

Statistical analysis

For the purpose of statistical analysis SPSS (Statistical Package for Social Sciences, version 20.0).

Following statistics were used for analysis:

• Correlation
• Regression Analysis