

## CHAPTER – 5

### SUMMARY AND CONCLUSION

Students thrive to pinnacle in education and thus settle with good employment opportunities. Students aiming towards admission in professional competitive courses like engineering and medicine undergo intense academic training other than the school curriculum. They likely contribute to greater levels of academic stress. Stress is a natural phenomenon which cannot be escaped during our lifetime. Thousands of different kinds of stress may be experienced throughout the lifetime of people. Stress affects the mind, body, and behavior in many ways, and everyone experiences it differently. How students cope with stress depends on the resources that are available to them and whether they have the skills to utilize these resources. Test anxiety has been observed to have a detrimental impact on aggregate ability measures, rather than isolated assessments. Positive therapy improves both physical and mental health, helps in the management of negative emotions, adjustment, family problems, stress disorder, depression and to have a pleasing personality with positive perception. The present study examined the resources available, key reasons for student stress, symptoms of stress and outlines some coping strategies among eleventh and twelfth standard students. Although the participants in this study were all matriculation school students from urban higher secondary classes, the findings from this study have importance and relevance to all high schools. Besides intervention programme through autosuggestion the study undertaken will give valuable information towards overcoming academic stress and exam fear among students.

Year after year findings from higher education have reinforced this relation. Hence with this background the present research on “**Resource Availability and Academic Stress among Higher Secondary Students**” was undertaken with the following objectives: To

1. obtain the academic information and resources available among selected students
2. determine the food opted by selected students.
3. recognize the role of parental involvement and the supportive network accessible to the selected students.
4. detect the symptoms of stress experienced and assess the stress level, test anxiety level and coping strategies adopted by selected students and
5. design an intervention programme and to gauge its effect in managing exam fear among selected students.

**Research Hypothesis:**

A research hypothesis is the statement created by research when they speculate upon the outcome of the research or experiment. The following hypotheses were formulated for the study.

1. There would be a significant difference in resource availability between eleventh and twelfth standard students.
2. There would be a significant difference in parental involvement and supportive network accessible between eleventh and twelfth standard students.
3. There would be a significant difference in symptoms of stress and strategies adopted to overcome stress between eleventh and twelfth standard students.
4. There would be a significant difference in student stress and test anxiety level before and after the Intervention programme among the selected students.

## **Research Design**

The design of the study was descriptive, comprising of quantitative and qualitative data collection and compilation. The study comprised of the following phases.

**Phase 1:** Conduct of survey among higher secondary students

**Phase 2:** Initiating an intervention programme

**Phase 3:** Evaluating the impact of the intervention programme conducted

**Phase 4:** Executing a case study among the selected students

### **Phase 1: Conduct of Survey among Higher Secondary Students**

Chennai is considered to have the best schools in Tamil Nadu that guarantee quality education with most promising results every consecutive year. Purposive sampling method was used for the selection of samples (higher secondary students). The investigator selected 500 students from eleventh and 500 from twelfth standard inclusive both boys and girls from six schools were selected for the study. Predesigned questionnaire was the tool used for the collection of data. Questionnaire developed by Ministry of Social Security, National Solidarity and Reform Institutions, Mauritius 2012 was used to assess the student stress. Test anxiety questionnaire, a tool developed and standardized by Nist and Diehl (1990) was used to measure the test anxiety among the selected students.

### **Phase 2: Initiating an Intervention Programme**

Based on the survey and information gathered from the selected students it was understood that there was a need for the intervention programme among the twelfth students to face the approaching board exam without anxiety and stress. The intervention programme was conducted in 2 schools among 90 students with medium stress level (57 students from school F and 33 from school B) by making 3 visits each in 3 batches, on the days convenient to the school authorities, teachers, and students' availability. The intervention program was integrated with the schedule of the educational counselors engaged by the schools. In order to achieve this goal, an effective auto-suggestion tool was developed and distributed in a form of a pamphlet.

Based on this, "Do's and Don'ts in approaching exams" and "top ten tips for self-enhancing thoughts" were also prepared. Pamphlets were handed over to the identified students. The students were also motivated with tips to face exam without fear, by emphasizing on memorizing tips, writing (to hold pen in grip) and neat presentation in exam answer sheets, importance of drinking water and food preferences to be followed for healthy learning and remembering, to enhance their thoughts that they can do it; face it with positivity by approaching favorite person for timely support, simple relaxation techniques, using simple yoga postures/breathing exercises and advised on minimum quantum of sleep or rest at proper intervals. To invoke interest among the students the session was made interactive. Doubts were clarified in the subsequent visits and frequent discussion over the phone was also made to provide necessary motivation. The process continued for three months.

### **Phase 3: Evaluating the Impact of the Intervention Programme Conducted**

After a period of three months, the impact of the intervention programme was measured using same tools administered at the beginning of the programme to know the improvement in overcoming exam anxiety and related stress.

### **Phase 4: Executing a Case Study among the Selected Students**

As a post assessment case study was conducted in phase four of the study. Among the samples selected for the intervention program, ten students were identified for the case study. The impact of the intervention program was recorded after their exams. The feedback received from students was recorded in the case study.

The salient features of the results pertaining to the study are discussed below:

## **Results and Discussion**

### **Phase 1: Findings of the Survey**

The findings of the research study are summarized below,

#### **Conspectus of the selected students**

- The data regarding the personal information of the selected eleventh and twelfth standard students represent age, family size, family type and number of siblings.
- Majority 73 per cent of the selected students in class eleven belonged to the age group 16 years and class twelve students (55 per cent) were of 17 years of age.
- Above, 70 per cent of eleventh and twelfth students belonged to small, nuclear family with one sibling. Thirty per cent of eleventh students and 28 per cent of twelfth students used private transport to reach their school.
- Majority of 95 per cent of twelfth and 92 per cent of eleventh students joined the present school as persistent good results were produced by that school.
- The results of the t-test revealed that there is no significant difference between eleventh and twelfth students in the factors that influenced them to join the present school.

#### **Resource availability**

- Regarding time as a resource 62 per cent of twelfth and 52 per cent of eleventh standard students spent approximately nine hours in school. Majority of students (62 per cent of eleventh and 61 per cent of twelfth standard students) had only half an hour of lunch interval.
- Notable information from the data is that only 58 per cent of twelfth and 53 per cent of eleventh standard students availed tuition classes. Out of which 15 per cent of twelfth students attended tuition classes on all seven days in a week since it may be helpful to cope up with academics.

- Ninety-five per cent of twelfth and 94 per cent of eleventh standard students did not attend coaching classes for preparation to IIT entrance during the academic year when the survey was conducted.
- Fifty per cent of the eleventh and 43 per cent of twelfth standard students had the future academic choice of getting admission in an engineering college.
- Thirty six per cent of twelfth and 31 per cent of eleventh students were studying full-fledged in the morning.
- Sixty seven per cent of the eleventh and 53 per cent of twelfth students contributed extra 2-4 hours per day for study, other than their regular study hours.
- Seventy-six per cent of twelfth and 73 per cent of eleventh students did not stick on to a time-table for studying. Hence 62 per cent of the eleventh and 58 per cent of twelfth students did not use a prioritized time-table for study.
- Majority 72 per cent of twelfth and 71 per cent of eleventh standard students postponed their study related work due to fear. It was noted from the study that 50 per cent of both eleventh and twelfth students could spare some time with their friends and other leisure time activities. Only 16 per cent of the eleventh and 10 per cent of twelfth students spent adequate time on creative activities and physical activities like exercise, yoga, and meditation.
- With regard to energy 57 per cent of the eleventh and 54 per cent of twelfth students to some extent experienced tiredness because of physical exertion that led to physiological fatigue while 47 per cent of the eleventh and 43 per cent of twelfth students sometimes expressed mental exertion which led to psychological fatigue. Study revealed that 51 per cent of eleventh and 46 per cent of twelfth standard students sometimes had visual fatigue due to the strain caused by reading continuously. Fifty three per cent of eleventh and 51 per cent of twelfth students sometimes felt that they lack leisure. Fifty seven per cent of eleventh and 50 per cent of twelfth students were sometimes frustrated

due to psychological fatigue. In spite of the piling up of academic activities 58 per cent of the eleventh and 55 per cent of twelfth students revealed that sometimes they had relaxed and energetic feel as well.

- Considering money as a resource 51 percent of the students received financial assistance in the form of pocket money. Student's requirements were taken care of by the parents whenever needed. It was found from the study that 68 per cent of students' parents controlled the amount their ward spends. Thirty per cent of students spent above Rs.101 per month from their pocket money on food, snacks and study materials.
- Among time, energy and money the resources available to students the computed 't' value indicated that there existed a significant difference in time spent for studies and time spent for various activities at  $p < 0.01$  level and regarding types of fatigue, financial assistance and money spent on non-academic activities there exist no significant difference between eleventh and twelfth students. **Hence, Hypothesis 1 which states that there would be a significant difference in resource availability between eleventh and twelfth standard students is partially accepted.**

#### **Food opted by selected students**

- It was surprising to know that majority 82 per cent of the selected students preferred variety in food. Above 70 per cent of both eleventh and twelfth standard students followed healthy food habits like eating simple and light meals, smart snacking and drank adequate water. Sixty per cent of the selected students had regular breakfast and included fiber in their diet. However, they also preferred fried food, eating out occasionally, having junk foods and aerated drinks.
- The computed 't' value indicates that there is no significant difference between eleventh and twelfth students in their food preferences and consumption.

## Parent's involvement

- Majority 83 per cent of parents involved themselves in school work and 70 per cent in career decisions of their children. Parental involvement got intensified when their children are in their final years of school like 53 per cent of parent rescheduled their time plan as their child's board exam approached and 60 per cent of parent created distraction free study environment and relaxed children from household work.
- Parents of 78 per cent of eleventh and 76 per cent of twelfth students hoped that their children will take up a professional degree in future. However 90 per cent of the selected students did not prefer to take up a professional degree in future.
- Chi-square test was used to determine the association between parent's wish on career choice and student handling them for differed opinion. High significant difference was found at  $p < 0.01$  level. Greater was the impact among the twelfth standard students (30.282) than eleventh standard students (23.554). Twelfth students handled their parent's differences of opinion on career choice effectively to pursue a career of their desire.
- Chi-square test was used to find the association between student's wish on career choice versus hours spent in school. Analysis shows high significant association at  $p < 0.01$  level among the selected students. Value for twelfth (35.733) was more compared to eleventh (20.931) standard students, proved that twelfth standard students work much hard to get admission into reputed colleges and so spent more hours for study.
- Fifty three per cent of the student's parents did not compare their children with others. However, 37 per cent of eleventh and 29 per cent of twelfth student's parents compared their child's academic performance with their friends. Nineteen per cent of twelfth and 10 per cent of selected eleventh students were compared with their relatives who were pursuing their studies.

### **Supportive network**

- It could be clearly seen from the data that 82 per cent of the twelfth and 77 per cent of eleventh students often depended on their parent for moral support. Sixty five per cent of the twelfth and 63 per cent of eleventh students often depended on their parent for psychological support. However 78 per cent of the twelfth and 67 per cent of eleventh students often depended on their teachers for academic guidance.
- The study attempted to examine whether there is any significant difference in parental involvement and accessible support from supportive network such as moral support, psychological support and academic guidance among eleventh and twelfth students. The computed 't' value connotes that there is no significant difference in the network of the supportive system accessed among eleventh and twelfth students. **Hence Hypothesis 2 which states that there would be a significant difference in parental involvement and supportive network accessible between eleventh and twelfth standard students is rejected.**

### **Satisfaction of academic performance**

- It was observed that 76 per cent of twelfth and 67 per cent of eleventh students' parents were not satisfied with the academic performance of their children as well majority 84 per cent of the twelfth and 73 per cent of eleventh students were also not satisfied with their own academic performance at school.

### **Symptoms of stress**

- Psychological symptom of stress in the form of confusion was felt sometimes by 60 per cent of eleventh and 54 per cent of twelfth students followed by poor concentration as expressed by 55 per cent of eleventh and 53 per cent of twelfth students.
- Anger which is one of the deadly signs of emotional symptoms of stress was expressed sometimes by the selected students and the percentage was higher (54 per cent) among twelfth when compared to 51 per cent of eleventh students.

- Physical symptoms of stress in the form of fatigue/tiredness were felt sometimes by maximum 56 per cent of twelfth and 50 per cent of eleventh students.
- Behavioral symptom of stress in the form of nightmare/ visual flash back / recurring dreams was felt sometimes by the selected students and the percentage was slightly higher (44 per cent) among twelfth when compared with eleventh students (42 per cent).
- The computed 't' value indicates that there is no significant difference in the symptoms of stress experienced between eleventh and twelfth students. **Hence first part of the Hypothesis 3 which states that there would be a significant difference in symptoms of stress experienced between eleventh and twelfth standard students is rejected.**

#### **Stress coping strategies**

- Majority 74 percent of the eleventh and 64 per cent of twelfth standard students informed that their daily favorite stress relaxer was talking to friends, followed by listening to music (70 per cent eleventh and 60 per cent twelfth). There existed a significant difference at  $p < 0.01$  level in stress coping strategies among the students. From the mean values, it was observed that eleventh students followed good stress coping strategies effectively to get relieved of stress as compared to twelfth standard students. **Hence second part of the Hypothesis 3 which states that there would be a significant difference in stress coping strategies between eleventh and twelfth standard students is accepted.**
- Correlation between three variables namely moral support, psychological support and academic guidance and coping strategies followed by the selected students showed high positive correlation significant at  $p < 0.01$  level. It could be inferred from the result that more the support accessible from supportive network, better was the coping strategies with stress by the selected students.

- It can be inferred from the data that majority of 82 per cent of eleventh and 70 per cent of twelfth students suggested to be relaxed and stay confident for better performance in the approaching exams. Since awareness is present, it is essential for the students to identify the cause for stress on continuous basis and practice simple methods to reduce stress.

### **Student stress**

- By using student stress tool it was observed that the level of stress among 57 per cent of the eleventh and 49 per cent of twelfth standard students was at a lower level, while 25 per cent of twelfth and 11 per cent of eleventh students had a medium level of stress.
- The computed 't' value indicated that there existed a significant difference in student stress between eleventh and twelfth students at  $p < 0.01$  level. The mean value (29.48) for twelfth standard students indicated that they were more stressed than eleventh standard students.
- Chi-square test showed statistically significant association between student stress level and the class in which the students are studying (eleventh and twelfth standard) at  $p < 0.01$  level ( $\chi^2 = 33.268$ ,  $p = 0.000$ ).
- Impact of stress level on symptoms of stress among the selected students was studied using one-way ANOVA results showed that there existed a difference significant at  $p < 0.01$  level in various symptoms of stress on various stress level among eleventh and twelfth standard students. Further analysis using Tukey's B multiple comparison test revealed that more the symptoms of stress experienced the students had more level of stress.
- Results of multiple regression analysis on student stress in relation to predictor variables such as conspectus of selected students, resources available, parent involvement, support accessible from supportive network, symptoms of stress and stress coping strategies of the selected eleventh standard students, revealed a significant contribution

on student's stress level ( $F=14.415$ ) at  $p<0.01$  level among eleventh students and ( $F=9.063$ ) significant at  $p<0.01$  level among the twelfth standard students.

### **Test anxiety**

- Application of test anxiety tool revealed that 27 per cent of twelfth and 23 per cent of eleventh students had good control over test anxiety while 64 per cent of twelfth and 63 per cent of eleventh students had a medium level of test anxiety.
- The computed 't' value indicated that there existed a significant difference in level of test anxiety among eleventh and twelfth students at  $p<0.05$  level. The mean value for eleventh students was high (26.15) which showed that they had more test anxiety than twelfth standard students.
- The chi-square value ( $\chi^2 =6.203$ ,  $p = 0.045$ ) implies that there is a significant association at  $p<0.05$  level between the test anxiety level and the class in which the students are studying (eleventh and twelfth standard).
- The results of correlation between resource availability with student stress and test anxiety of the selected students indicate that use of time is significantly inversely related to student stress ( $r = -0.118$  at  $p<0.01$  level) and test anxiety ( $r = -0.089$  at  $p<0.05$  level) among eleventh students, whereas though there was a similar inverse correlation in the case of twelfth students with student stress ( $r = -0.080$ ) and test anxiety ( $r = -0.076$ ) the correlation was not significant.
- Impact of test anxiety level on symptoms of stress among the selected students was studied using one-way ANOVA results showed that there existed a difference significant at  $p<0.01$  level in various symptoms of stress on various test anxiety level among eleventh and twelfth standard students. Further analysis using Tukey's B multiple comparison test revealed that more the symptoms of stress experienced the students had high test anxiety level.

- Results of multiple regression analysis on student's test anxiety in relation to predictor variables such as conspectus of selected students, resources available, parent involvement, support accessible from supportive network, symptoms of stress and stress coping strategies of the selected eleventh standard students, revealed a significant contribution on student's test anxiety level ( $F=11.767$ ) at  $p<0.01$  level among eleventh students and ( $F=5.859$ ) significant at  $p<0.01$  level among the twelfth standard students.

## **Phase 2: Outcomes of the Intervention Programme**

Based on the outcome of the survey results, it was found necessary to organize an intervention programme for the selected students, who had medium levels of stress. The intervention programme organized for the selected students are presented and discussed under the following heading.

### **Student stress**

- Ninety twelfth standard students selected for intervention had a medium level of stress before the intervention. After intervention however 24 per cent of them got good control over stress, 72 per cent had a shift to the low level of stress and four per cent expressed that they retained the medium level of stress. It was encouraging to note that the knowledge gained through the intervention programme, had helped the students to reduce their level of stress.

### **Test anxiety**

- Among ninety, twelfth students selected for intervention 73 per cent had a mild level of test anxiety and 27 per cent of them had a high level of test anxiety before the intervention. After intervention however 23 per cent of them got good control over test anxiety, 73 per cent had a shift to the mild level of test anxiety.

### **Phase 3: Evaluating the Impact of the Intervention Programme Conducted**

- In order to find whether the intervention had an impact on the student stress and test anxiety level scores, the mean scores of the students before and after intervention vary significantly, hypothesis 4 was framed.
- The result showed that there was a significant difference in student stress and test anxiety before and after intervention programme given to the selected students at  $p < 0.01$  level. The computed 't' value implies that there is an improvement with regard to student's stress and the level of test anxiety after undergoing the intervention programme.
- **Hence the Hypothesis 4 which states that there would be a significant difference in student stress and test anxiety level before and after the Intervention program among the selected students is accepted.**

### **Phase 4: Executing Case Study among the Selected Students**

- An analysis of the ten students from twelfth standard who had stress and test anxiety was selected from the surveyed sample for the case study. The case study method was used to recognize and develop deeper understanding about intricate relationship between important elements in daily living.
- All of them were experiencing a time constraint. Assignments, record work, homework and regular tasks resulted in sleeplessness towards board exam. Pending work over loaded and no rest drained their energy. This led to uncomfortable feeling making students feel sick and week.
- The selected students though aware of the benefits of exercise, yoga and breathing exercises to reduce stress and keep the mind calm, did not practice it regularly due to lack of time. Some students were not aware of the impact of effect of thinking positively. Positive thinking

through regular practice enhanced quality of life. This led them to do their tests and board exam with high self-esteem and self-confidence.

- By attending the intervention programme, they realized the importance of stress coping strategies like positive therapy through auto-suggestion to improve their overall wellbeing and they were also able to use the resources wisely. Cent percent of the students were fully satisfied and understood the perception of the intervention programme.
- Interactive sessions with group discussions and lectures helped to raise the listener's interest and reinforce memory retention as they provided connectivity between facts and the real-world applications of the facts the students were facing.
- The intervention programme made a big difference to feel lighter and decision to be happy. Their confidence levels increased, they were able to tackle academic issues in an effective manner and deep breathing exercise had helped them to concentrate during studies without anxiety. The students recognized supportive network accessible as a readily available blessing and spent quality time with them.
- .Students were impressed by the benefits of the effect of the tips to burn out exam stress and expressed that combating academic stress was made easy and now they have faced the challenges and finally joined in reputed college of their wish to pursue higher studies.
- They practiced simple yoga postures daily. Students learnt to make right use of time, breathing exercises made them feel comfortable without fatigue, their attention levels spiked and also mentioned that they could make right decisions at the right time by handling academic stress without anxiety and handle academic situations better. This made them confident in continuing the practices mentioned in the autosuggestion tool throughout their life to lead a happy and holistic life.

## CONCLUSION

Student community has a predominant role in deciding the future growth of our nation. Many scholars in the field of behavioral science have carried out extensive research on stress and its outcome and concluded that the topic needed more attention as a large majority of students had reported that they experienced stress in their final year at school. This study has provided an insight into the academic stress and test anxiety existing among the students pursuing eleventh and twelfth standards in Chennai city. Based on the findings of the present study, the widespread prevalence of unsatisfactory methods in handling academic stress and test anxiety remains a great concern. Eleventh standard students are more anxious towards the next academic year and see it a burden and twelfth standard students are more stressed towards the approaching board exam. As Dr. A.P.J. Abdul Kalam said **“All of us do not have equal talent, but all of us have equal opportunities to develop our talents”**. Proper guidance and counseling is required so that the stress levels could be reduced and the students can achieve better by developing their talents. It is imperative to revamp the curriculum to keep a proper balance of co-curricular activities along with curricular activities. In reality, there is an utmost need to have activity based and role based curriculum so that the children can enjoy learning with their regular schooling. **Without the involvement of students themselves they can't succeed but with their sincere involvement they cannot fail.** That should be the motivational words behind each student. They should involve themselves in their studies whole heartedly without any stress so that they will not face any failure.

***It is always felt impossible until it is done***

***(Nelson Mandela)***

At this juncture it is very important for teachers to join hands with parents and the society at large in order to make learning lively and fruitful and make what is thought impossible possible, as the future of India is in the hands of today's young students'. It is our responsibility to prepare the students' to be a responsible citizen of tomorrow by taking little efforts to prepare them to

overcome stress and anxiety. Students should understand, that in life grade and exams are temporary but education is permanent.

### **Limitations of the Study**

Few limitations that are to be taken into consideration in the present study are given below:

- The sample size and lack of geographical coverage since our study only concentrated in Chennai. Therefore the findings of this study cannot be generalized and as such the researchers suggest replication of this study using larger samples from other parts of the state and country to validate study findings.
- The selected students were from the matriculation schools and the results therefore can be generalized to the students belonging only to matriculation schools.
- The study could not have external criteria for clinical examination to the students who had reported moderate or severe level of physical and mental symptoms of stress against which the validity of the self-report measures could be judged.
- The students constituted the main data source in this study. Some times with student as the solo data source, validation of the results may not be as effective as when compared with estimates from multiple sources. Obtaining additional information from other sources like parents and teachers would have enhanced validity.
- During the conduct of this study NEET exam marks were not made mandatory for medical and dental college admission which for student of today is a great source of added anxiety and stress.
- Caution should be exercised when generalizing results of this program since participants may not be representative of all students at the school.
- Some students may not experience exam anxiety to warrant an intervention and comparison of non-equivalent study groups may mask program effectiveness.

- The intervention was given for limited time to the students. If it were given for a long duration, the students would have benefited more in terms of reduction of their exam anxiety.
- Other therapeutic techniques were not involved to alleviate the problems of the school students.
- Only higher secondary students got the benefit of auto suggestion, other areas of students were not focused in the study to get the same benefit in terms of reduction of exam anxiety which is more common among students from other classes.

### **Recommendations**

It is hoped that, these findings will help the individual students, parents, teachers, and the higher education administrators to put in place mechanisms that mitigate the effects of student stress. In addition, the finding will also spur a scholarly debate on academic stress among students in higher institutions.

- The study can be replicated in other locations using same method with greater number of students and with greater number of schools to see if the same results will be generated.
- Result from other future studies can be used to compare and contrast with the results of this study.
- Research can be done among students preparing exclusively for NEET/IIT/JEE exams who are expected to undergo a great level of added anxiety and stress.
- Further studies on this topic should focus on studying differences in levels of exam anxiety and academic stress factors between types of schools (public schools, private schools, CBSE schools) and all boy's or all girl's schools.
- Studies investigating the role specific subject play in raising students' stress should also be pursued in future.

- Since intervention was found to be very effective in reducing exam anxiety among the twelfth students, it can be recommended for tenth and eleventh standard students and it should be made mandatory in all schools.
- A psychologist or counselor can be appointed in the schools to facilitate sound physical and mental health for the students.
- Workshops on auto suggestion - a positive therapy to overcome exam anxiety can be conducted for the students, teachers and parents.
- Separate research can be undertaken to study the stress of parents during children's final board exams.