4

RESULTS AND DISCUSSION

A combination of survey research and field experiment research was undertaken for the current study. The research details the stress level and its related repercussion of high school students and the field experiment pre – test and post – test study was undertaken to analyze the influence of Stress Inoculation Training on reducing stress and its repercussions, enhancing resilience and stress coping repertoires and improving academic performance of the beneficiaries.

The study comprised of 528 school students, aged 13 - 15 years studying in 9^{th} standard represented by three government and three private schools. Out of these six schools, two schools (one private and one government) were selected for the experiment and one section of the 9^{th} standard constituted the experimental group (Government - 41, Private - 40). The remaining students of other sections of these two schools were considered as the control group (Government - 41, Private - 78).

The analyzed data and corresponding discussions were presented in this section as sequenced below

I. **General profile of the population sample**
II. **Stress level and its repercussions among the population level**
III. **Efficacy of SIT in term of stress level and its repercussions**
IV. **Retention potential of SIT in terms of overall well- being**
V. **Feedback of the beneficiaries**

I GENERAL PROFILE OF THE POPULATION SAMPLE

Significant rifts would appear when the attempt was made to match the cures to the causes of the growing level of student stress. Hence efforts were made to collect the general profile of the population sample based on the Appendix III constructed.

In the present study, socio – demographic data refers to the data that draws information on the social and statistical characteristics of the population selected. The different demographic characteristics of the students considered for the present study were age, gender and type of family. The Table VII shows the general profile in a nutshell.

TABLE - VII

GENERAL PROFILE OF THE POPULATION SAMPLE

Variables	Government		Private		Total	
	N	%	N	%	N	%
Gender						
Boys	109	63	177	49.9	286	54.2
Girls	64	37	178	50.1	242	45.8
Total	*173*		*355*		*528*	
Age						
13 years	10	5.8	5	1.5	15	2.8
14 years	130	75.1	162	45.6	292	55.3
15 years	33	19.1	188	52.9	221	41.9
Total	*173*		*355*		*528*	
Family type						
Nuclear	104	60.2	269	75.7	373	70.6
Joint	69	39.8	86	24.3	155	29.4
Total	*173*		*355*		*528*	

Moir and Jessel (1992) states that “the difference between genders is natural and innate”. Gender shapes the classroom experience through both peer and teacher behaviour. The resulting picture is one wherein boys and girls receive

strong gender messages and variable treatment on their gender. Based on these reviews, the researcher considered to profile the gender differences in the present study. It could be observed from the above table that 54.2 per cent were boys and 45.8 per cent were girls from the entire sample. This unequal sex – wise distribution of the sample shows the reality of Indian scenario that more of boys in comparison to the girls were enrolled for school education.

The ratio of enrolment of boys to girls was almost equal in private schools, but for government schools it was 2 : 1. However the overall enrolment rate in private school was double the rate of enrolment in government school; which clearly depicts that the government school has been losing its charms as the days roll on.

As the present study views Stress Inoculation Training beyond the view of a class or subject to learn. This can be used by students as a platform, forum or lab to visit and revisit their emotions particularly stress, enhance their coping skills, share experiences and apply the coping skills to a variety of situations or stressors through a scientific outlook. Hence the age and type of family was also appraised.

Glancing at the age composition the highest percentage of respondents (55.3%) were aged 14 years and least number (2.8%) in their 13^{th} year. Over 42% of them had completed their 15^{th} birthday (the right age of 9^{th} standard students in India).

In India, the family is the most important institution that has survived through the ages. The joint family has always been the preferred family type in Indian culture, and most Indians at some point in their lives have participated in joint family living (Nandan and Eames, 1980). With the advent of urbanization and modernization; younger generations are turning away from the joint family form. This reality was proved even in the current research by showing that a majority of the students from both the schools hailed from nuclear families (70.6%) and only about a quarter of them belonged to joint family (29.4%).

II. STRESS LEVEL AND ITS REPERCUSSIONS AMONG THE POPULATION SAMPLE

The survey research of analyzing the stress level, its causative factors and indicators in the form of signs and symptoms experienced and behaviour manifested were hammered out into the following heads and discussed accordingly.

A. Stress Level

i. Categorization of the population sample with reference to the stress level

ii. Gender - specific and Institution specific - differences in the stress mean score

B. Causative factors

i. Correlation between stress level and the mean causative factor score

ii. Gender - specific and Institution - specific differences in the causative factor score

C. Stress indicators

i. Categorization of the population sample with reference to the level of stress indicator

ii. Gender - specific and Institution - specific differences in the stress indicator mean score

A. Stress Level

Students of today are facing severe stress which they find very hard to cope up with. Unmanaged stress for a longer duration result in the growth of unbalanced youngsters, who in due course turn out to be a threat. Therefore it becomes necessary to undertake an in - depth research among school students, so that a suitable coping strategy could be designed to enhance their stress coping repertoires.

The checklist constructed to adjudge the stress level of the selected respondents was used to analyze their level of stress and adjudge the institution – specific and gender – specific differences. The following section details the same.

i. Categorization of the population sample with reference to the stress level

The checklist designed for the purpose of appraising the stress level of students was scored by every individuals' response that facilitated their categorization into low, moderate and high level of stress. The Table VIII and Figure 5 projects the categorization of the selected lot of students based on the stress level in relation to the type of school (government or private) they are enrolled into.

TABLE – VIII

CATEGORIZATION OF THE POPULATION SAMPLE WITH REFERENCE TO THEIR STRESS LEVEL

		Type of School						Chi-Square
		Government		Private		Overall		
		No	%	No	%	No	%	
Stress Level	LOW (<=25)	-	-	65	18.3	65	12.3	36.258 **
	MODERATE (26-50)	139	80.3	229	64.5	368	69.7	
	HIGH (51-75)	34	19.7	61	17.2	95	18.0	
		173	**100.0**	**355**	**100.0**	**528**	**100.0**	

** - Significant at 1% level

CATEGORIZATION OF THE POPULATION SAMPLE BASED ON THEIR STRESS LEVEL

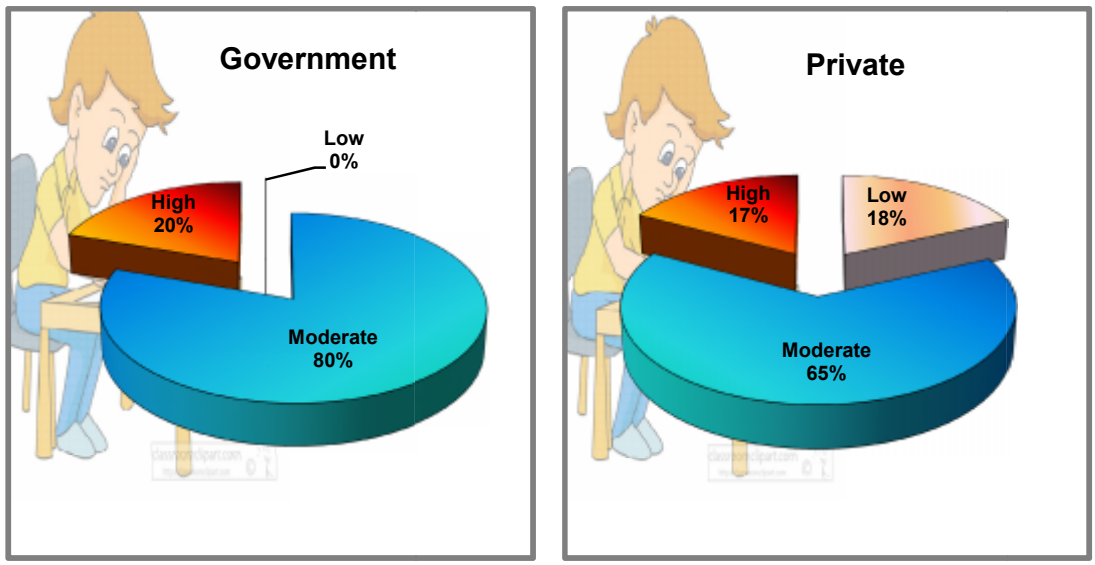


FIGURE - 5

The categorization of the respondents as per their level of stress as low, moderate and high with reference to the type of school was statistically tested by computing chi - square. And it was found that

- 80.3 per cent of the government school students against 64.5 per cent of private schools students of a total of 69.7 per cent were found to be moderately stressed.
- None of the government school students perceived themselves to be under low stress whereas 65 students (18.3%) of private school fall into this category.
- 19.7 per cent of the government school students suffer from severe stress against 17.2 per cent of the private school students.

These observations along with the chi - square value of 36.258 (df-2 and $p < .01$) evidently proves that the enormity of stress among the selected middle school students was found to be significant with reference to the categorization based on the level of stress – low, moderate and high.

A bird's eye view on the figure cautions the psychologists and academicians towards the zero percentage of respondents enrolled in the government school to be categorized under low level of stress. In other words the stress appraisal of the government school students was found to be higher than private school respondents.

Moreover, the statistics of the present study in relation to the overall percentage of 69.7 (368 students out of 528) categorized under moderate level of stress indicates that at any point of time these students may step into the next critical category of severe stress, which calls upon an immediate but relevant programme on stress management to be formulated and implemented before they get into their next phase of facing board exams.

The comparative study conducted by Maraichelvi and Karthika (2013) on perceived stress level among government and private school children was found to be concordant with the current finding that majority of the sample being categorized under moderate level of stress and the finding that none of the government school students were envisaged to be categorized under low level of stress.

Moreover, a study conducted by Manikandan (2013) on stress among adolescent learners of 350 respondents studying in various government, government aided and matriculation higher secondary schools in Madurai city showed a concordant result that 9.71 per cent of the adolescent learners have low level of stress, 82.58 per cent of the adolescent learners have moderate level of stress and 7.7 per cent of the adolescent learners have high level of stress.

ii. Gender - specific and Institutional - specific differences in the stress mean score

Research highlights that girls tend to face more stress at their preadolescent and adolescent stage. Previous nationwide studies have also shown that girls were more likely to deal with stress than boys were, and also seek help more often than boys. Boys usually ignore stress and find a distraction to keep their mind off the situations (Sapna, 2010). At Croatan (Skiba, 2011),

these studies have been proven wrong. Random Croatan students took a survey on what they were stressed about and the data proved that boys were actually more stressed then girls were. This has necessitated the need to find out if there was any significant difference between male and female school students as reflected in their perceived stress level.

In the same way, there were many inconsistent findings related to the effect of the type of school on the stress level of students. This had necessitated the need to contribute more to the research literature by exploring the interactive relationship of the stress score of the selected students among the gender and the type of school. Univariate ANOVA was carried out for this purpose and the results were presented in Table IX.

TABLE - IX

GENDER – SPECIFIC AND INSTITUTION – SPECIFIC RELATIONSHIP ON MEAN STRESS SCORE OF THE POPULATION SAMPLE

		Stress Level						TOTAL			ANOVA		
		Government			Private								
		Mean	S.D	No.	Mean	S.D	No.	Mean	S.D	No.	Sum of Squares	df	F value
Student Gender	Male	44.54	7.02	109	39.90	13.42	177	41.67	11.62	286	2710.607	1	21.923**
	Female	45.16	8.46	64	34.24	11.46	178	37.12	11.77	242			
TOTAL		44.77	7.57	173	37.06	12.78	355	39.59	11.89	528			
ANOVA	Sum of Squares	5969.918									Interaction - Gender Vs Institution		
	Df	1									1094.509	1	8.852**
	f value	48.283**											

** - Significant at 1% level

According to Bason (1998), there were many ways in which gender shapes the classroom experience of students, starting with what boys and girls bring to school and the curriculum materials they encounter. While analysing the influence of gender on the stress mean score of the students of government school an augmented score of 45.16 was procured by the girls against their boy counterpart scoring 44.54. This data vividly proved that the girls of government school were more stressed than their counterparts. Certain previous researches were also found to be consistent with the present finding. Gadzella and Baloglue (2001) found that female students experience stress during changes in their life. Sinha (2003) found that there was a significant difference between the stress experienced by male and female students and the research by Mates and Alison (1992) showed that female students experience more stress when faced with problems compared to the male students.

In contrast, it was observed that private school boys obtained a mean score of 39.90 which was more than their counterpart mean score of 34.24, and thus making it clear that the female students of private school are less stressed than the boys there. The gender difference among the private school participants presents a contradictory finding to the reports in the literature that the girls experience higher stress than do their counterparts. Though it was very clear from the present finding that the boys were subjected to higher stress than girls of private school, the stress among the girls cannot be ignored. It should be carefully monitored.

However analysing the overall mean score of both the institutions put together, it was found that boys reported higher level of stress with a mean score of 41.67 compared to girls who obtained a mean score 37.12. It was also brought into being that the lower stress mean score of girls in total was essentially attributed to the lower mean score of private girls. The study done by Maraichelvi (2015) also supports the present finding by concluding that boys responding to the survey reported higher mean score on stress (a total mean score of 43.17) than the girls with a mean score of 38.47, who responded to the survey. The results of the Anova ('f' value =21.923, df - 1,$p<0.01$) suggest that the boys reported stress levels that were significantly higher than their girl counterparts.

While considering the type of school for analysis an overall mean score of 44.77 was obtained by government school students against 37.06 of private school students which authentically proves that the type of school do influence the stress level of students. Also the 'f' value of 48.283 (df – 1 p<.01) substantiates that the students enrolled in government school were comparatively more stressed than their private counterparts.

Thus it can be said that the school environment and the family situation of government school might be contributing towards enhanced stress among them. Similar results were also obtained by Bohannon (2000), who investigated the impact of school related stressor on public school students and found significant correlations among them. The present finding was also in accordance to the study conducted by Hussain, Kumar and Hussain (2008) among 100 Delhi high school students. Augustine *et al*; (2011) also has observed that the school-wise comparisons showed that the government school students had statistically higher mean scores on stress perception.

As the leading motive of private schools was to prepare their students for professional courses, it was expected that the stress appraisal among these students could be high. But the present study has got a different conclusion. This might be due to the verity that the students at the government school hail from poor income families where the economic deprivation has always been associated with anxiety, depression, and irritability. With these qualities it could be well understood that tendency on the part of parents to be punitive, inconsistent, authoritarian, and generally non supportive of their children and their academics. The strain of poverty may also promote the use of disciplinary approaches that take less time and effort than approaches such as reasoning and negotiating.

Moreover, one of the key points of private education is individual attention. Students who attend private schools can be more academically challenged, exposed to clearer value systems, given greater access to teachers, and may simply feel safer than local public school options. On the other hand, the children of private schools who hail from either middle or high income group, were given

due care and support by their parents too. Hence with better atmosphere at home and more responsive school environment, no wonder the students of private schools were not as stressed as their counterparts.

INTERACTION EFFECT BETWEEN GENDER AND TYPE OF SCHOOL ON MEAN STRESS SCORE

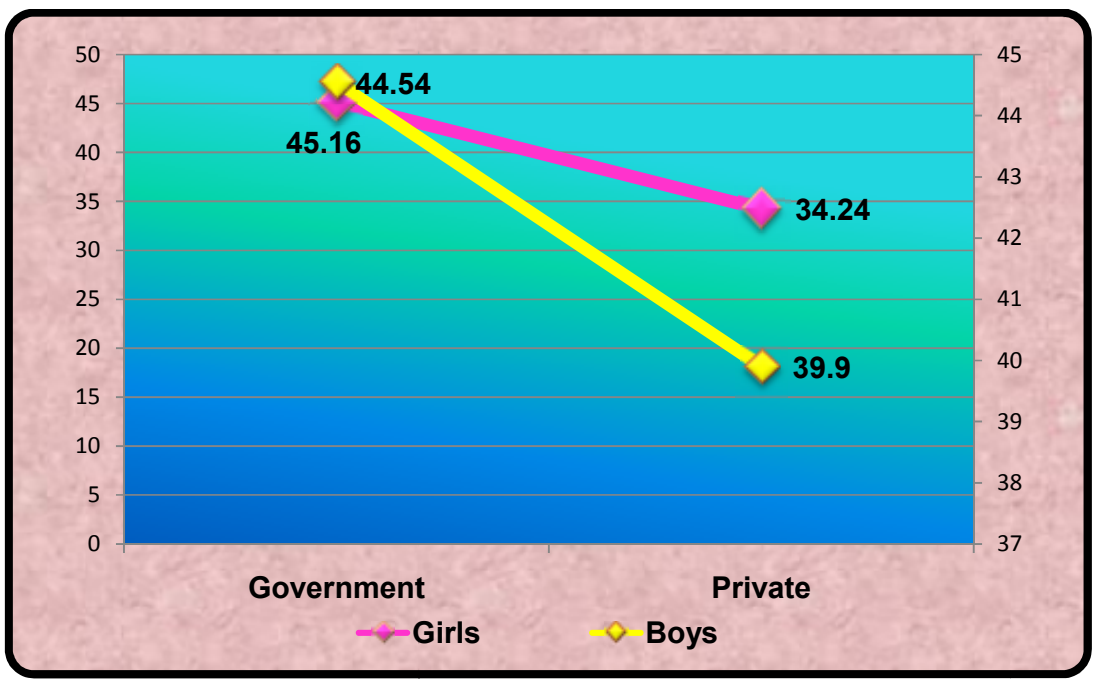


FIGURE - 6

Drilling further into the interaction effect between the type of school and gender on the stress score of the respondents, it was found to be statistically significant with a 'f' value of 8.852, df – 1 and p<.01. The figure 6 - above shows a more or less comparable stress score of government school students in relation to gender and hence a better interaction effect. ***Therefore the hypothesis numbered H_a1 stating that institution and gender - specific differences does not have any effect on the stress level of the middle school students stands rejected.***

Furthermore, the study conducted by Adeyo and Okonkwo (2010) takes a step ahead of the study of Hussain, Kumar and Hussain (2008) in examining whether the school type influence the job stress among 250 workers in Nigeria

and observed that the participants who had their schooling in the government school experience high stress when compared to the private school counterparts. This finding alerts the psychologists, human developmentalists and educationists and policy makers to focus on measures that would inoculate the individuals against stress at their formative years itself i.e., 11 - 15 years, so that they learn the coping strategies and overcome stress efficiently in their later stages.

B. Causative factors

Fear of school failure is reinforced by both the teachers and the parents, causing students to lose interest in studies (Verma *et. al*; 1990; Shah, 1991). This was similar to the scenario in the East Asian countries where psychiatrists use the terms 'high school senior symptoms' or 'entrance examination symptoms' to indicate mental health problems among students (Lee *et. al*; 2000).

The past decade and a half has witnessed substantial activity in all areas of research on adolescent stress (Grant *et. al*., 2003). However, in spite of the potential significance of stressors, reviews of the adolescent stress literature present a picture of a field early in its development (Grant *et al*., 2003; Grant, *et al*; 2004; McMahon *et. al*; 2003). These reviews concluded that there was still inconsistency in the field about the way stress had been defined and measured among the student population. The reviews called for clarity of the significance of specific stressors in relation to specific outcomes of psychopathology, and research on possible mediators and moderators on the association between stressors and psychopathology. In lieu with this, the present study focused on the causative factors and its order of influence on the stress of high school students and was discussed as follows.

i. Correlation between stress level and the mean causative factor score

With the scope of adding evidence to the existing literature, the present study identified seven different types of causative factors namely teacher, money, attitudes and feelings, school work, exam, parents and friends. The correlation statistics between the overall stress score and the individual causative factors was

carried out, in order to find out the order of prominence of the causative factors among the respondents with reference to the institution - specific and gender - specific differences and was tabulated in Table X and Figure 7.

TABLE - X

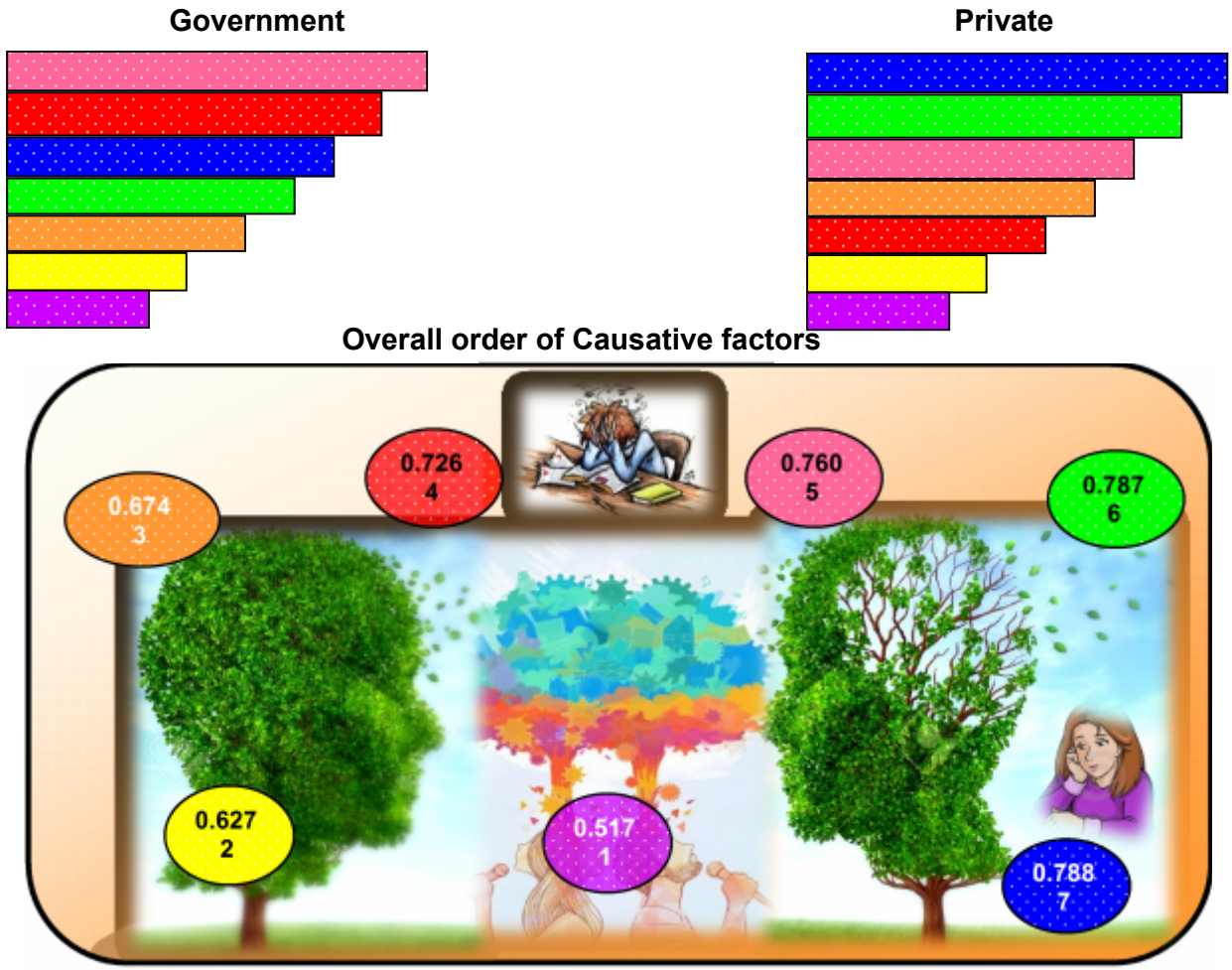
CORRELATION BETWEEN OVERALL MEAN STRESS SCORE AND THE IDENTIFIED SEVEN CAUSATIVE FACTORS' MEAN SCORE

Stressor	Correlation value between the stress mean score and the causative factor score							
	Government		Private		Male		Female	
	'r'	Rank	'r'	Rank	'r'	Rank	'r'	Rank
Teacher	.487(**)	5	.761(**)	4	.706(**)	6	.742(**)	3
Money	.258(**)	7	.620(**)	7	.558(**)	7	.632(**)	7
Attitudes and feelings	.689(**)	3	.848(**)	1	.797(**)	2	.819(**)	2
School Work	.666(**)	4	.836(**)	2	.825(**)	1	.823(**)	1
Exam	.740(**)	2	.732(**)	5	.750(**)	4	.685(**)	5
Parents	.749(**)	1	.775(**)	3	.793(**)	3	.724(**)	4
Friends	.421(**)	6	.710(**)	6	.735(**)	5	.643(**)	6

**** - Significant at 1% level**

RANKING OF THE CAUSATIVE FACTORS IN RELATION TO THE TYPE OF SCHOOL AND GENDER

INSTITUTION - SPECIFIC



GENDER - SPECIFIC

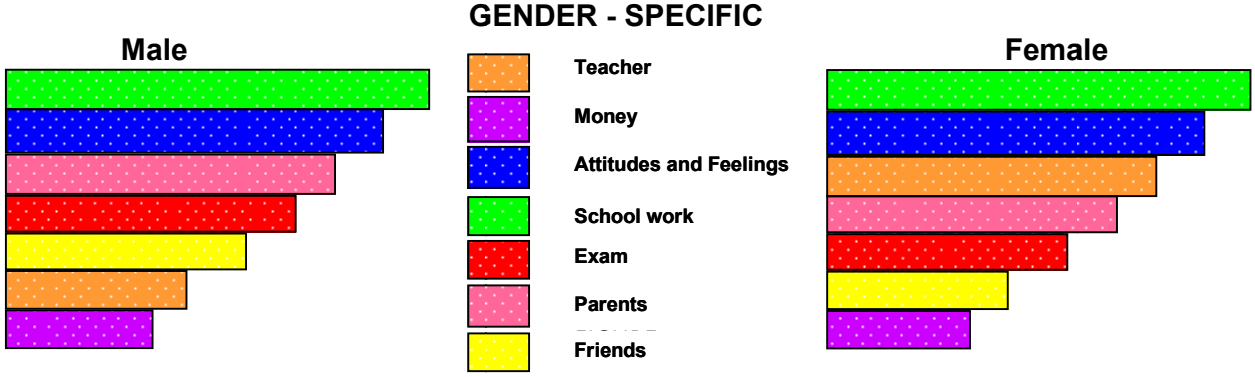


FIGURE - 7

The summated scores of the seven identified causative factors teacher, money, attitudes and feelings, school work, exam, parents and friends were submitted for correlation coefficient and ranked in the order of prominence based on their coefficient value. A glance at the table shows significant positive correlation of the stress mean score with each and every identified causative factor irrespective of the type of institution and gender. However the order of prominence varies among the dependent variables - type of school and gender.

Considering the students enrolled in government school, a higher correlation value of 0.749 was observed between the stress mean score and the parent as a causative factor and hence ranked as the first crucial stressor. According to Mental Health America's estimate, 20 per cent of teens were clinically depressed, and the real tragedy lies with how their parents approach the subject. The informal chat with the respondents indicated that their financial status, argument between the parents over financial issues, and higher expectations with spending less quality time on the part of their parents had accounted for considering parents as the first and foremost trigger. However the private school respondents reported parents as an influential factor but in the third place with correlation value of 0.775.

The correlation related to the stressor – Exam was ranked at the second place by the government school students, and their counterpart claimed it be the fifth influential factor. This vast difference might be attributed to the reason that the private schools conduct exams very often as week tests, unit tests, mid – term tests and term exams. Hence the frequency of conducting exams for the students had very well lowered the fear of facing it.

The telling statistics of the correlation related to attitudes and feelings as a causative factor had ranked it in the first place among the private school students and in the third place among government school respondents. Hence this factor was found to be more or less equally influencing the school children in general. Hale (1998) had proposed that internal pressures among adolescents were

thought to be the most significant stress trigger because each and every person determine rules and standards for themselves, wherein when a discrepancy occurs between what he/she was actually doing, then this person experience stress. It was at this juncture, the investigator felt the need of developing confidence and enhancing self esteem of these children as a special domain embedded within the SIT component.

The students of the private school had significant, positive and greater correlation towards school work as the second influential factor. Subsequently the government school students claimed it to be the fourth order in triggering their stress. One possible explanation for this difference was that the government school students have less assignment and projects when compared to their counterparts. Whereas the private school, students felt that the increased amount of homework, home study, projects, assignments, deadlines etc. causes stress in them. The pile - sort activity by Chandra and Batada (2006) corroborates with the present finding which identified school work as a frequent source of stress. Also several other studies done by Jones, Sears and Milburn (1990); Bauwens and Hourcade (1992); Helms 1996; De Ande *et. al*; (1997); Romano (1997); and Maraichelvi and Karthika (2013) supported the present finding.

The causative factor - Teacher influence the respondents of both government and private school more or less equally at the fifth and fourth place respectively. With regard to the distribution of the stressors - Friends and Money - stands in the 6^{th} and 7^{th} place irrespectively of the type of institution the respondents were enrolled into. It has to be noted that the students of government school, though hailing from low socio - economic status, the money does not hit the stressor list predominantly.

Focusing on the gender - specific difference in the correlation statistics and the order of predominance the stressors namely school work, attitudes and feelings, and money had taken the first, second and the seventh place respectively among both boys and girls. Certain other stressors like exam, parents and friends were also found to more or less equally influence the male and female

population. Looking into the teacher as a trigger, the girls found it to be triggering their stress in third place and their counterparts claiming it to be in the sixth place. This difference owes to one reason that girls usually do have the tendency to be in good books with their teacher and the boys show a carefree attitude towards them.

On the whole, the strong relationship between the identified causative factor and the mean stress score projects that each and every identified stress trigger contributes to the overall stress level of the high school students. ***Largely, the figure clearly depicts that the order of the stressor correlated with the stress score list hitting the government school boys were different from the list of government school girls and the order of stressors shows dissimilarity among the private boys and private girls, thereby refuting the hypothesis numbered H_a2.***

ii. Gender - specific and Institution - specific differences in the causative factor score

Stress is the feeling under pressure. Stressors / causative factors are the things in the environment that a person responds to. Stressors can be as simple as background noise in the environment or as complex as a social situation. Understanding the role and impact of stressor was considered to be an important step in the prevention and treatment of its associated chronic diseases. A descriptive statistics of the Univariate ANOVA was carried out to find the main effects namely the type of school on the causative factors, the influence of gender on the same and its interaction effect. The Table XI and Figure 8 illustratively depicts the gender and institution specific differences among the population sample with respect to their identified seven causative factor score.

TABLE – XI

GENDER – SPECIFIC AND INSTITUTION - SPECIFIC DIFFERENCES IN THEIR CAUSATIVE FACTOR SCORE

Student Gender		Respondents						TOTAL			ANOVA		
		Government			Private								
		Mean	S.D	No.	Mean	S.D	No.	Mean	S.D	No.	Sum of Squares	df	F value
Teacher	Male	8.16	1.86	109	7.25	2.73	177	7.59	2.47	286	11.554	1	2.026 Ns
	Female	7.75	1.80	64	7.13	2.49	178	7.30	2.34	242			
TOTAL		8.01	1.84	173	7.19	2.61	355	7.46	2.41	528			
ANOVA	Sum of Squares	70.987									Interaction - Gender Vs School		
	Df	1									2.367	1	2.367 Ns
	F value	12.448**											
Money	Male	5.35	1.55	109	4.19	1.84	177	4.63	1.82	286	257.694	1	91.982**
	Female	5.08	.96	64	2.56	1.77	178	3.23	1.94	242			
TOTAL		5.25	1.36	173	3.37	1.98	355	3.99	2.00	528			
ANOVA	Sum of Squares	338.342									Interaction - Gender Vs School		
	Df	1									50.842	1	18.147**
	F value	120.768**											
Attitudes& Feelings	Male	6.66	2.22	109	6.04	2.58	177	6.28	2.46	286	75.653	1	13.458**
	Female	6.64	2.27	64	5.11	2.28	178	5.52	2.37	242			
TOTAL		6.65	2.23	173	5.57	2.47	355	5.93	2.45	528			
ANOVA	Sum of Squares	113.139									Interaction - Gender Vs School		
	Df	1									22.822	1	4.060*
	F value	20.126**											

** - Significant at 1% level, * - Significant at 5% level, Ns - Not significant

TABLE – XI (Cotnd ….)

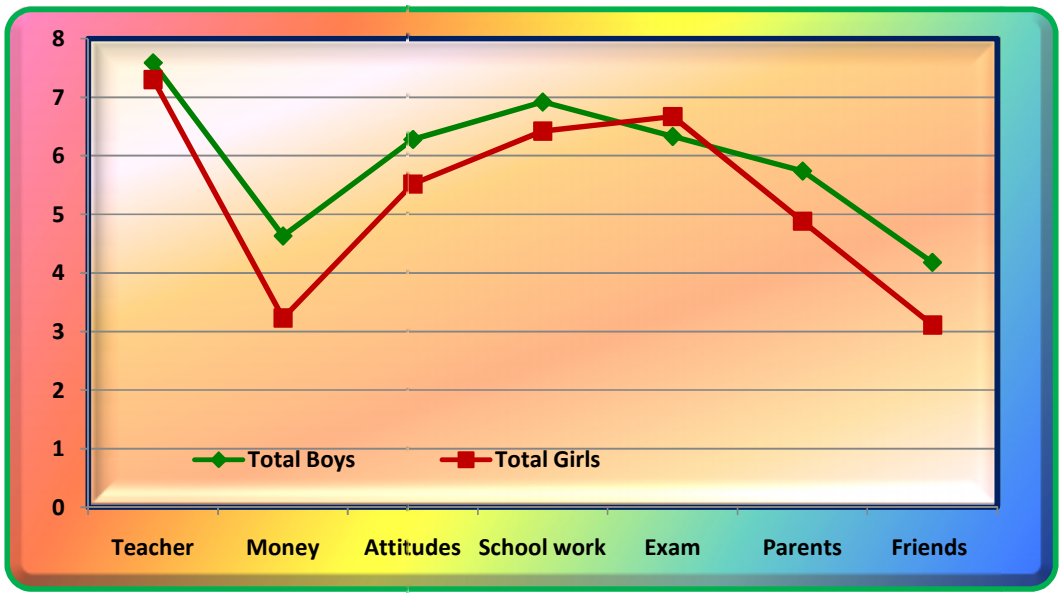
GENDER – SPECIFIC AND INSTITUTION - SPECIFIC DIFFERENCES IN THEIR CAUSATIVE FACTOR SCORE

Student Gender		Respondents						TOTAL			ANOVA		
		Government			Private								
		Mean	S.D	No.	Mean	S.D	No.	Mean	S.D	No.	Sum of Squares	df	F value
School Work	Male	7.27	1.56	109	6.71	2.73	177	6.92	2.37	286	32.979	1	5.388*
	Female	8.03	2.00	64	5.84	2.79	178	6.42	2.78	242			
TOTAL		7.55	1.77	173	6.28	2.79	355	6.69	2.57	528			
ANOVA	Sum of Squares	172.133									Interaction - Gender Vs School		
	Df	1									74.061	1	12.100**
	F value	28.124**											
Exam	Male	6.30	2.08	109	6.34	2.62	177	6.33	2.42	286	15.534	1	2.605 Ns
	Female	6.80	2.39	64	6.62	2.49	178	6.67	2.46	242			
TOTAL		6.49	2.20	173	6.48	2.55	355	6.48	2.44	528			
ANOVA	Sum of Squares	0.285									Interaction - Gender Vs School		
	Df	1									1.217	1	0.204 Ns
	F value	0.048 Ns											
Parents	Male	6.03	1.98	109	5.56	2.37	177	5.74	2.23	286	97.196	1	20.003**
	Female	5.75	1.89	64	4.57	2.27	178	4.88	2.23	242			
TOTAL		5.92	1.95	173	5.06	2.37	355	5.35	2.27	528			
ANOVA	Sum of Squares	65.892									Interaction - Gender Vs School		
	Df	1									14.375	1	2.958 Ns
	F value	13.561**											
Friends	Male	4.78	1.31	109	3.81	2.02	177	4.18	1.84	286	150.147	1	52.302**
	Female	5.11	1.01	64	2.39	1.74	178	3.11	1.98	242			
TOTAL		4.90	1.22	173	3.10	2.01	355	3.69	1.98	528			
ANOVA	Sum of Squares	325.366									Interaction - Gender Vs School		
	Df	1									84.898	1	29.573**
	F value	113.339**											

**** - Significant at 1% level, * - Significant at 5% level, Ns - Not significant**

CAUSATIVE FACTOR MEAN SCORE OF THE POPULATION SAMPLE

GENDER - SPECIFIC DIFFERENCES



INSTITUTION – SPECIFIC DIFFERENCES

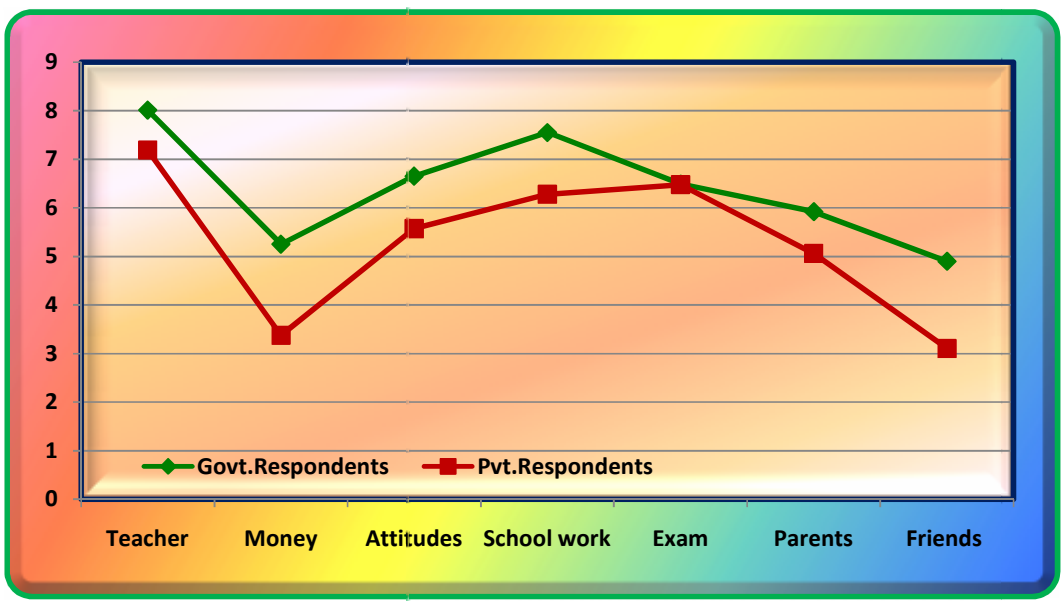


FIGURE - 8

The table gives a vibrant picture of the univariate ANOVA conducted to answer three major questions.

- Does gender have effect on the various causative factors experienced by the respondents?
- Does the type of school influence the causative factor score of the respondents?
- Was there an interaction between the gender Vs the type of school on the causative factors of the respondents?

The f value between the gender and five of the identified causative factor (Money - f value 91.982, df - 1 and p<.01; Attitudes and Feelings - f value 13.458, df -1 and p<.01; School work - f value 5.388, df-1 and p<.05; Parents - f value 20.003, df - 1 and p<.01; Friends - f value 52.302, df-1 and p<.01) establishes the fact that the gender had a remarkable influence on those factors in response to stress. In research view, the differences between male and female respondents probably might be due to the gender attitudes, actions, and personality traits.

However one most important point to be observed from the first part of the figure was that the stressor - Teacher and Exams - were found to influence both boys and girls with equal magnitude. This fact was proved with the mean score procured by the participants for the causative factor – Teacher – with overall mean score of 7.59 among boys against 7.30 among girls and for the causative factor – Exam - the overall mean score of 6.33 among boys against 6.67 among girls.

Answering to the second question of influence of the type of school on the prevalence of causative factors in response to stress, it was evident from the table that the f value calculated separately for all identified causative factors was found to be significant at 1 per cent level (Teacher - f value 12.448, df - 1 and p<.01; Money -f value 120.768, df - 1 and p<.01; Attitudes and Feelings - f value 20.126 df - 1 and p<.01; School work - f value 28.124 df - 1 and p<.01; Parents, f value 13.561 df - 1 and p<.01; Friends - f value 113.339, df - 1 and p<.01) except for the causative factor - exam (f value .048, df - 1 and p>.01). This verity again was

illustrated in the second part of the figure and could be interpreted that exam as a stress trigger has got equal intensity with all the respondents irrespective of the type of school they are enrolled into.

Furthermore, responding to the third question of interaction between the gender and the type of school in relation to the causative factor score, it was found that the interaction of the main effects on the dependent variable (i.e. the causative factor score) was significant for most of the stress triggers namely money, attitudes and feelings, school work and friends.

Kai - wen (2010) in his study on stress sources among college students in Taiwan identified the school factors such as too much homework, unsatisfactory academic performance, preparation for test / examination, lack of interest in a particular subject as the most critical factor stressing them. According to Roberts and White (1989) academic work reflects some of the high level of stress that college students have reported. Some of them experience grade pressures that cause students to have problem with stress. Too much stress can interfere with a student preparation, concentration and performance.

However, the interaction effect on the stressor – Teacher, Exam and Parents was not found to be statistically significant with f value of 0.415 df-1 and $p>.01$, f value 0.204 df - 1 and $p>.01$, and f value 2.958 df - 1 and $p>.01$ respectively, further substantiates that these three stress triggers affect the participants with more or less equal magnitude irrespective of the independent variable - the type of school and gender.

C. Stress Indicators

Psychiatrists have expressed concern at the emergence of education as a serious source of stress for school-going students - causing high incidence of deaths by suicide (D'Mello, 1997). Many adolescents in India are referred to hospital psychiatric units for school-related distress – exhibiting symptoms of depression, high anxiety, frequent school refusal, phobia, physical complaints, irritability, weeping spells, and decreased interest in school work (Verma *et al*; 2002). The number of symptoms experienced and behaviour

manifested by the subjects were indicative of the far – reaching effects of stress in their lives.

The stress indicator checklist designed for the purpose of appraising the signs and symptoms experienced and behaviour manifested in response to stress consisted of 50 items showing a wide range of physiological, behavioural and mental indicators in confrontation with stressful events by the respondents. The subsequent section elaborates on how the stress indicators had taken a hold on the 9th standard students in relation to the dependent variables.

i. Categorization of the sample population with reference to their level of stress indicator

The Table XII and Figure 9 depicts the categorization of the population sample based on the level of stress indicator along with signifying the association between the mean stress score and stress indicator mean score.

TABLE - XII

ASSOCIATION BETWEEN THE STRESS LEVEL AND STRESS INDICATOR LEVEL

Stress Level	Stress indicator level						TOTAL	
	Low (<=17)		Moderate (18-34)		HIG (>35-50)		No.	%
	No.	%	No.	%	No.	%		
Low (<=25)	57	30.6	8	3.4	-	-	65	12.3
Moderate (26-50)	123	66.1	202	85.2	43	41.0	368	69.7
High (51-75)	6	3.2	27	11.4	62	59.0	95	18.0
TOTAL	186	100	237	100	105	100	528	100
Correlation value between overall stress mean score and stress indicator score was 226.723**								

**** - Significant at 1% level**

RELATIONSHIP BETWEEN STRESS LEVEL AND STRESS INDICATOR LEVEL OF THE POPULATION SAMPLE

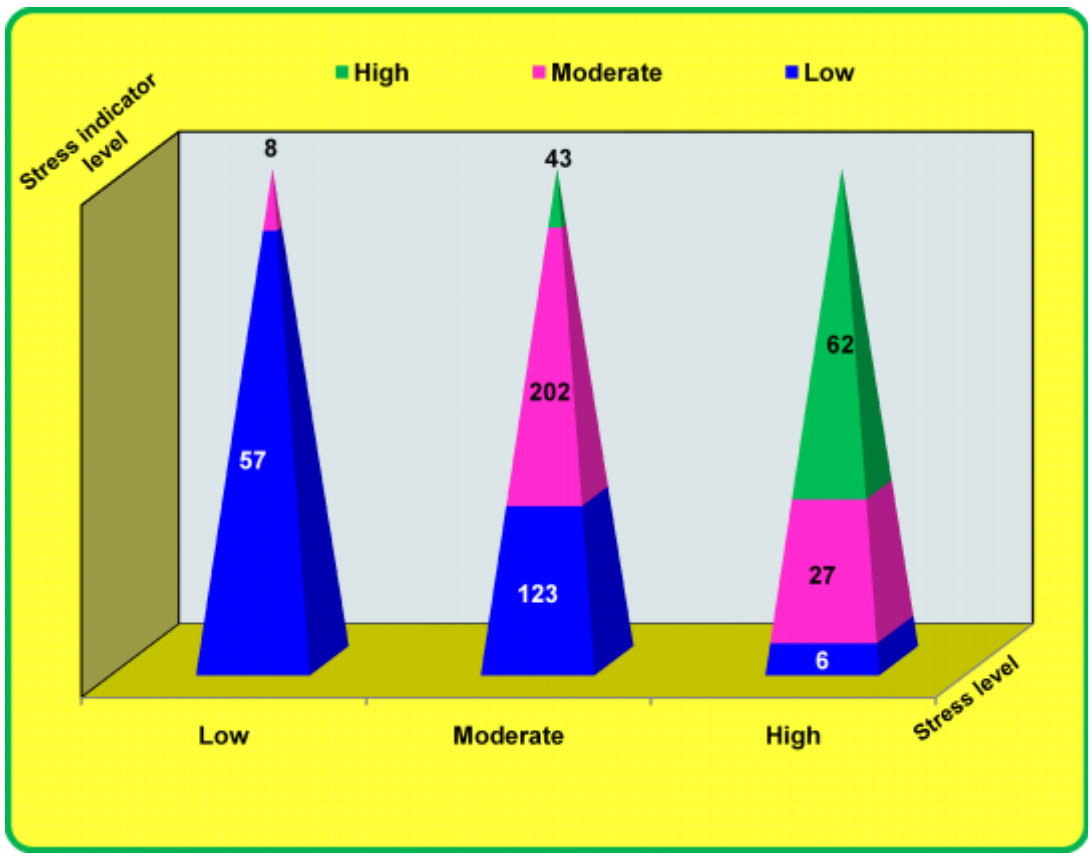


FIGURE - 9

As a part of the study, the signs and symptoms experienced and behaviour manifested was examined as stress indicator and found that out of the 65 respondents categorized under the low level of stress, 57 of them secured less than 17 on the overall mean score on stress indicator performa. It also has to be noted that none of them were classified under experiencing severe signs of stress.

The table also connotes certain imperative information regarding the association between the stress level and stress indicator as given below:

- Though only 65 students reported low stress, 186 of them secured scores between the ambits of 0-17 in the stress indicator checklist.
- Out of 368 (69.7%) participants who reported moderate level of stress, 202 of them showed moderate severity of the indicators experienced, followed by 123 students exhibiting low response to stress. However 43 of them reported that their stress indicator level ranged from above moderate to high level with a mean score of more than 35.
- Amongst 95 respondents experiencing higher level of stress. 59 per cent (62 in number) could associate their high level of stress with a high score on stress indicator. In other words higher the level of stress, higher was the severity of indicators in the form of signs and symptoms that the students experience due to stress. On the other hand six of them could not relate their level of stress with indicators.

The above data was subjected to correlation test between the stress mean score and the stress indicator score and (f value 226.723, df - 4 and $p<.01$) was procured and found to be significant at 1 per cent level. This proved that the stress of the students was highly correlated to the stress indicators experienced by them.

ii. Gender - specific and Institution - specific differences in the stress indicator mean score

According to Shapiro (2014) U.S. teenagers report feeling more stressed out with school being a main cause. The survey of 1,018 teenagers, aged 13 to 17, and 1,950 adults conducted by Shapiro found that many teens were being overwhelmed or depressed because of their high stress levels.

As understood, the selected lot of 9th graders showed a wide range of signs and symptoms and those being manifested in behaviour in response to the stress they experience. The entire 50 items on checklist of stress indicator were marked by one or the other student mentioning it as indicative of stress. This subsection investigates, which kind of indicator was severe in comparison with the other kinds of indicators among these students and how far it was influenced by the variables namely the type of school and gender and was presented in Table XIII and Figure 10.

TABLE – XIII

GENDER - SPECIFIC AND INSTITUTION - SPECIFIC DIFFERENCES IN THE MEAN STRESS INDICATOR SCORE

Indicators	Gender	Type of School						Total			Analysis of variance			
		Government			Private									
		Mean	S.D	No.	Mean	S.D	No.	Mean	S.D	No.	Sum of squares	df	Mean square	'f' value
Physiological indicator	Boys	11.29	2.99	109	7.63	5.01	177	9.03	4.70	286	1489.537	1	1489.537	104.296**
	Girls	10.59	2.83	64	3.88	3.00	178	5.66	4.18	242				
	Total	11.03	2.94	173	5.75	4.53	355	7.48	4.77	528				
		Sum of squares – 2766.536									**Interaction Gender vs. school**			
		df –1												
		Mean square – 2766.536												
		'f'-value –193.710**									**258.078**	**1**	**258.078**	**18.070****
Behavioural indicator	Boys	9.54	2.60	109	7.24	3.94	177	8.12	3.66	286	383.492	1	383.492	31.942**
	Girls	10.14	2.90	64	5.06	3.61	178	6.40	4.10	242				
	Total	9.76	2.72	173	6.15	3.92	355	7.33	3.96	528				
		Sum of squares – 1358.871									**Interaction Gender vs. school**			
		df –1												
		Mean square –1358.871												
		'f'-value –113.182**									**213.483**	**1**	**213.483**	**17.781****

**** - Significant at 1% level**

TABLE – XIII (Contd…)

GENDER - SPECIFIC AND INSTITUTION - SPECIFIC DIFFERENCES IN THE MEAN STRESS INDICATOR SCORE

Indicators	Gender	Type of School						Total			Analysis of variance			
		Government			Private									
		Mean	S.D	No.	Mean	S.D	No.	Mean	S.D	No.	Sum of squares	Df	Mean square	'f' value
Mental indicator	Boys	11.48	3.26	109	8.40	5.37	177	9.57	4.91	286	1295.980	1	1295.980	67.619**
	Girls	11.78	3.20	64	4.50	4.23	178	6.43	5.12	242				
	Total	11.59	3.23	173	6.44	5.21	355	8.13	5.24	528				
		Sum of squares – 2647.304									**Interaction Gender vs. school**			
		df –1												
		Mean square –2647.304												
		'f'-value –138.126**									**489.012**	**1**	**489.012**	**25.515****
Overall score on indicators	Boys	32.31	7.57	109	23.27	13.37	177	26.71	12.31	286	8869.343	1	8869.343	79.331**
	Girls	32.52	7.53	64	13.44	9.90	178	18.49	12.56	242				
	Total	32.39	7.53	173	18.34	12.73	355	22.94	13.08	528				
		Sum of squares –19856.387									**Interaction Gender vs. school**			
		df –1												
		Mean square –19856.387												
		'f'-value –177.604**									**2786.728**	**1**	**2786.728**	**24.926****

**** - Significant at 1% level**

GENDER - SPECIFIC AND INSTITUTION - SPECIFIC DIFFERENCES IN THE MEAN STRESS INDICATOR SCORE

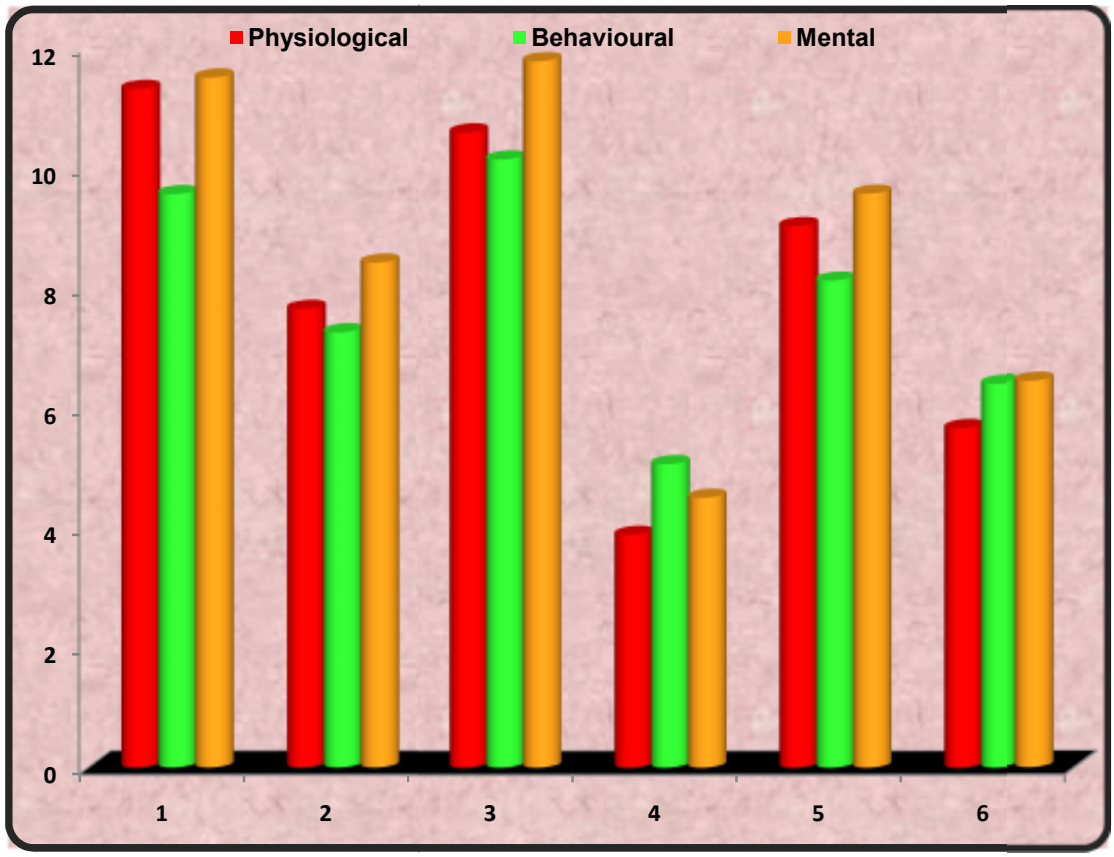


FIGURE – 10

From the figure, it was clear that the bar diagram shows that the mental indicator was reported as most critical among the three various indicators by government boys, private boys and government girls. Then again, the physiological indicator measured at the second highest and behavioural indicator in the third place among all these respondents. In contrast, the private girl respondents' who reported lower stress when compared to their counterparts felt that the behavioural indicator affects them the most, followed by mental indicator and at last stands the physiological indicator.

The overall mean score on stress indicator of both boys and girls when put together, it was observed that the girl students' exhibit all the three

types of indicators in more or less similar fashion (Physiological – 5.66, Behavioural – 6.40 and Mental – 6.43). The boy participants cited the mental indicator as the highest response to stress (9.57) followed by physiological indicator (9.03) and behavioural symptom was reported as less with a mean score of 8.12.

The table also gives a vibrant picture of the univariate ANOVA conducted to answer certain questions like

- Does the type of school influence the indicator score (separately and totally) of the respondents?
- Does gender have effect on the various indicators (all three categories separately and totally) experienced by the respondents?
- Was there an interaction between the gender vs. the type of school on the stress indicator (separately and totally) of the respondents?

While examining the influence of the type of school on the indicators in response to stress, it was evident from the table that the 'f' value calculated separately for every type of indicator and totally put together was found to be significant at 1 per cent level (Physiological – 'f' value 193.710, df-1 and $p<.01$; Behavioural – 'f' value 113.182, df-1 and $p<.01$; Mental – 'f' value 138.126, df-1 and $p<.01$; Overall – 'f' value 177.604, df-1 and $p<.01$).

The 'f'- value of the various indicators between the gender (Physiological – 'f' value 104.296, df-1 and $p<.01$; Behavioural – 'f' value 31.942, df-1 and $p<.01$; Mental – 'f' value 67.619, df-1 and $p<.01$; Overall – 'f' value 79.331, df-1 and $p<.01$;) proved that gender had a remarkable influence on all the three indicators in response to stress. In researcher view, the differences between boy and girl respondents probably might be due to the participants gender nature and characteristics.

This finding was authenticated by a previous finding by Mezulis et al (2009) on emergent gender differences in depressive symptoms. Participants were 366

youth from a community sample who completed measures of depressive symptoms, stress, and negative cognitive style at ages 11, 13, and 15. Results indicated that gender differences in depressive symptoms emerged prior to gender differences in cognitive vulnerability and stressful life events; depressive symptoms significantly mediated the emergent gender difference in cognitive style and dependent interpersonal stress.

For the third query of interaction between the gender and the type of school in relation to the stress indicator score, it was found that the interaction of the main effects on the indicator score (i.e. the dependant variable) was significant for each and every indicator as well as for its overall mean score ('f' value – 24.926, df-1 and $p<.01$) as reported by the respondents. ***This finding vividly explains the fact that gender and the type of institution do have an impact on the stress indicators of the respondents thereby authentically rejecting the hypothesis numbered H_a3.***

The findings discussed so far, when put together has meticulously demonstrated that the stress level and its repercussions among the middle school students was startling and strongly influenced by the type of school and gender. The finding also gives a feeling of apprehension for the society in general and educators, researchers and policy makers in particular to initiate urgent strategies to overcome this fiery issue.

III. EFFICACY OF SIT IN TERM OF STRESS LEVEL AND ITS REPERCUSSIONS

Stress Inoculation Training (SIT) was a cognitive – behavioural approach to stress management that was developed in the early 1970's as a treatment programme for phobias (Meichenbaum and Cameron, 1972; Meichenbaum, 1985 and 1993; Meichenbaum and Deffenbacher, 1988). Since then, SIT has been implemented as a stress treatment programme with considerable success in a wide range of settings. As the term 'inoculation' implies, SIT was designed to impart skills to enhance resistance to stress. By training effective coping skills prior to stress exposure, the individuals will be prepared to respond more favourably to negative stress events.

The SIT was conducted through a three - stage training intervention namely conceptualization or educational phase, skill acquisition and rehearsal phase and finally the application and follow-through phase, tailored to the need of the student subjects selected (government school boys – 14 and government school girls – 27, private school boys – 27, private school girls – 13) for the training.

The objective of this analysis was two - fold. First was to establish the impact of SIT on the stress level and its repercussions among the student subjects (trainees). The second objective was to examine the extent to which the effectiveness of SIT varied as a function of factors such as the type of school and gender. The results of these analyses identified the conditions under which SIT was effective and provided practical guidelines for effective future training implementation.

The following sections provide the descriptive analysis in relation to prior and post SIT on the experimental and control group. The impact made by SIT among the students was hammered into the following heads:

A. Stress Level – pre and post SIT

i. *Categorization of the experimental and control group based on their stress level*

ii. *Impact of SIT on stress mean score of the experimental and control group*

B. Impact of SIT on Causative factors

C. Stress Indicators – pre and post

i. *Categorization of the experimental and control group based on the difference in their stress indicators level prior and post SIT*

ii. *Gender - specific and Institution - specific difference of the experimental and control group based on the mean stress indicators' score prior and post SIT*

A. Stress level – Pre and Post SIT

Stress Inoculation Training (SIT) is a flexible individually - tailored multifaceted form of cognitive - behavioural therapy. SIT package planned for the 9th graders addressed three major objectives. The first and foremost was to enhance the familiarity of the stress environment they are exposed to. The second objective was to build up skills in order to maintain effective performance even in stressful situations followed by the third objectives of boosting their confidence in their ability to perform. To accomplish the last objective, opportunities were provided to practice stress coping skills in a setting that gradually approximates the stress environment. With these objectives, the effect of SIT on the stress level of the selected respondents were discussed below.

i. Categorization of the experimental and control group based on their stress level

The Table XIV and Figure 11 depicts the number and percentage comparisons of the student trainees of both the experimental and control group being categorized into the already defined levels of stress namely low, moderate and high based on their stress score both prior and after SIT.

TABLE – XIV

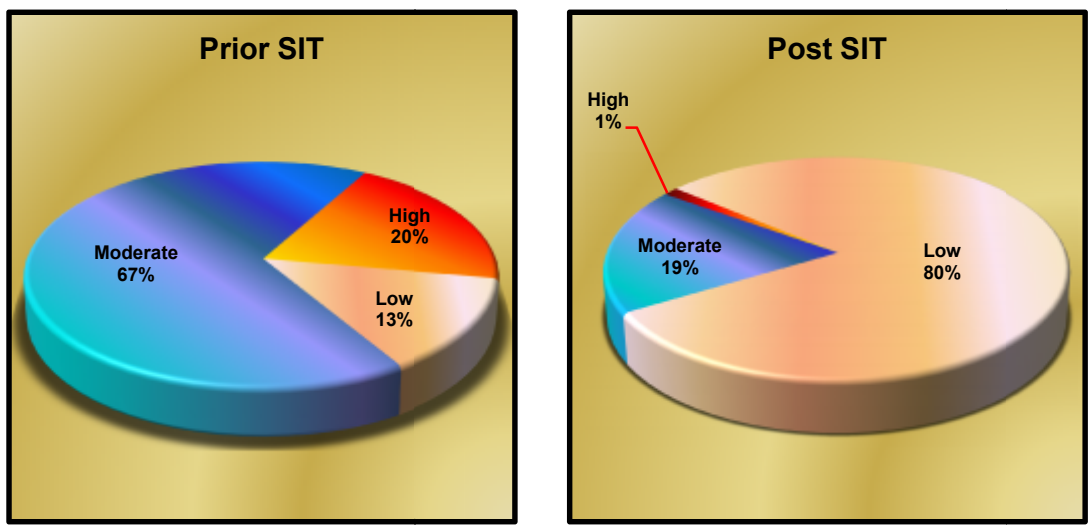
PRIOR AND POST SIT CATEGORIZATION OF THE EXPERIMENTAL AND CONTROL GROUP BASED ON THE STRESS LEVEL

Stress level	Government								Private							
	Experiment				Control				Experiment				Control			
	Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Low (< = 32)	-	-	37	90.2	3	7.3	5	12.2	11	27.5	28	70	41	52.6	42	53.8
Moderate (33-45)	37	90.2	4	9.8	35	85.4	28	68.3	17	42.5	11	27.5	26	33.3	20	25.6
High (>=46)	4	9.8	-	-	3	7.3	8	19.5	12	30.3	1	2.5	11	14.1	16	20.5
Total	**41**	**100**	**41**	**100**	**41**	**100**	**41**	**100**	**40**	**100**	**40**	**100**	**78**	**100**	**78**	**100**
Mean	40.51		24.27		39.54		38.15		39.58		25.95		32.90		32.76	
S.D	4.17		5.26		4.35		9.74		12.82		10.36		11.62		13.55	
't' test	**16.090****				**0.972^{Ns}**				**6.562****				**0.096^{Ns}**			

** - Significant at 1% level, Ns - Not significant

PRE AND POST SIT OVERALL CATEGORIZATION OF THE EXPERIMENTAL AND CONTROL GROUP BASED ON THEIR LEVEL OF STRESS

EXPERIMENTAL RESPONDENTS



CONTROL RESPONDENTS

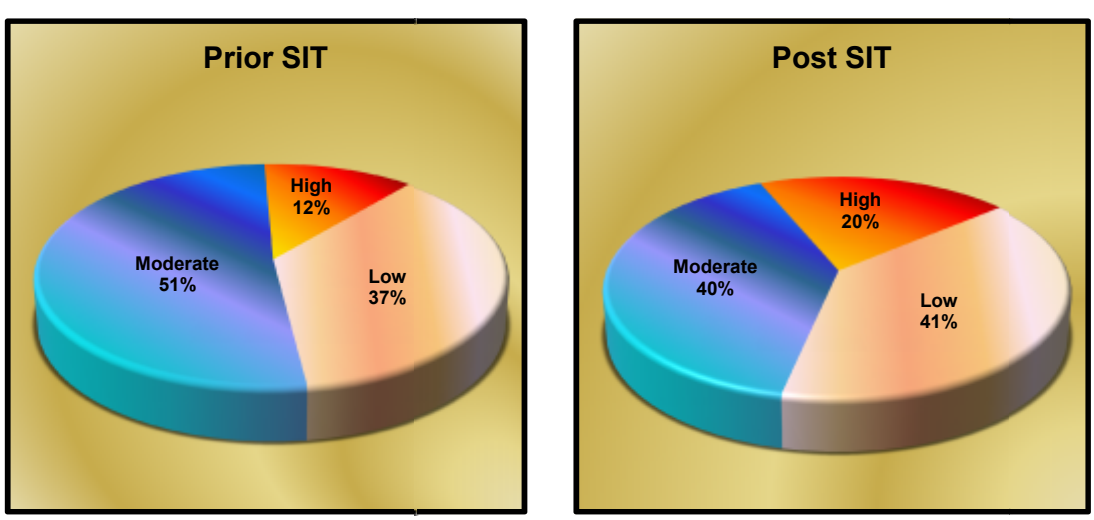


FIGURE - 11

The efficiency of a defensive stress inoculation training programme for adolescents that consists of a blend of progressive muscle relaxation, cognitive restructuring, and assertiveness training was examined. Students were compared with control group on measures of stress level based on the scores obtained on the checklist designed for this purpose. On the whole compared with controls, the training programme participants showed significantly greater improvements towards exhibiting lower stress levels after SIT. These improvements were again counterchecked for further follow up assessment.

It was apparent from the table that four and 12 students of experimental group enrolled in government school and private school respectively had been pigeonholed under high level of stress prior the intervention. However after intervention there was a considerable decline to only one student subject in total (contributed by the private school respondent) in the category of high stress.

A noteworthy number of students (37 out of 41 enrolled in government school and 17 out of 40 in private school) who had perceived themselves to be suffering from moderate level of stress also found a significant decline to four and 11 respondents respectively. In other words an augmentation in the number of respondents being categorised under low level of stress was vivid (from nil to 37 subjects in government school; from 11 to 28 in private school). Hence majority of the experimental group could shift themselves to low level of stress by practicing and applying the coping skills and thereby had at their disposal a repertoire of stress inoculation techniques to implement.

Looking into the control group irrespective of the type of institution, the number of student subjects increased in the category of high level of stress and declined in the moderate level. However the number of students who perceived themselves to be in the category of low stress had seen only one or two subjects being added post SIT. Thus the stress of students was found to only move towards the worser side. This verity cautions psychologists and academicians to formulate an intervention which would facilitate them to cope up with stress.

The results also statistically analyzed by 't' test had provided evidence that the experimental group of both the schools showed an augmentation of stress mean score after SIT with significance at 1 per cent level. Where is the mean score of the control group of both the schools did not change authenticated by the insignificant t value.

On the whole, SIT has bolstered the students' preparedness and developed a sense of mastery over the usage of coping skills, which undoubtedly authenticates the efficacy of the three tiers SIT intervention provided to them. ***Thereby the hypothesis numbered H_b1, which states that 'the SIT does not have an impact on the stress level of the selected beneficiaries' stands rejected.*** Consequently, this study had produced results which corroborates the findings of a great deal of previous work in the field of SIT as a stress treatment programme (Register, Beckham, Mary and Gustafson, 1991; Saurders *et. al;* 1996; Meichenbaum, 2001).

Therefore the need based individually tailored SIT designed for the 9^{th} graders was found to be effective in reducing the stress level of more than 80 per cent of the beneficiaries. This finding in turn supported the assumption that repeated follow – up sessions would even more dwarf the number of students in the category of moderate stress and completely erase the number in the category of high stress.

ii. Impact of SIT on stress mean score of the experimental and control group

The Table XV and Figure 12 illustrates the gender - specific and institution - specific differences of the experimental and control group based on the stress mean score prior and post SIT.

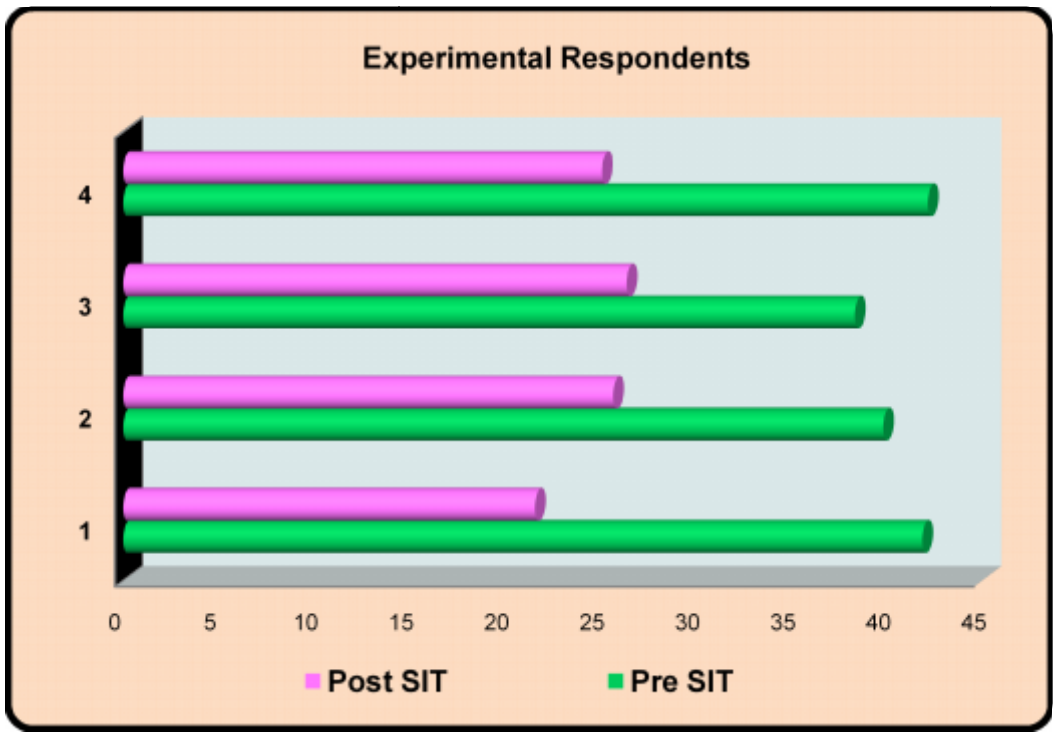
TABLE - XV

INSTITUTION AND GENDER SPECIFIC DIFFERENCES OF PRE AND POST STRESS MEAN SCORE

Variables	Stress level mean score		Number	S.D		df	't' value
	Pre	Post		Pre	Post		
Government school							
Control group							
Boys	39.76	38.12	17	4.92	9.87	16	0.673 Ns
Girls	39.38	38.17	24	4.00	9.87	23	0.684 Ns
Experimental group							
Boys	41.86	21.57	14	4.49	5.17	13	9.670**
Girls	39.81	25.67	27	3.89	4.82	26	16.385**
Private school							
Control group							
Boys	31.06	31.66	47	11.77	13.55	46	0.319 Ns
Girls	35.68	34.42	31	11.01	13.60	30	0.528 Ns
Experimental group							
Boys	38.33	26.37	27	13.21	11	26	4.740**
Girls	42.15	25.08	13	12.05	9.24	12	4.740**

**** - Significant at 1% level, Ns – Not significant**

INSTITUTION AND GENDER SPECIFIC DIFFERENCES OF THE EXPERIMENTAL SUBJECTS



1 – Government Boys, 2 – Government Girls, 3 - Private Boys, 4 – Private Girls

FIGURE - 12

An overall look into the table and figure lucidly demonstrates that a significant lower stress mean score was procured after SIT in comparison to the pre SIT score by the experimental lot of students irrespective of the type of school and gender. This major finding authenticates that the SIT intervention had not only insulated the participants from experiencing the detrimental effects of stress but also had exposed them to eustressful conditions; which in turn served as motivational factors to cope up with stress.

The experimental participants of government school (both boys and girls) who had higher stress mean score could tremendously bring down their level of stress as evident in their lowered mean score (boys from 41.86 to 21.57 with 't' value - 9.670, df - 13 and p 0<.01 and girls from 39.81 to 25.67 with 't' value - 16.385, df - 26 and p 0<.01. Looking at the experimental participants of the

private school a similar finding as in case of their counterpart was observed, with a significant lowered mean score of 26.37 from 38.33 with 't' value - 4.740, df - 26 and p 0<.01 among boys and 25.08 from 42.15 with 't' value - 4.740, df - 12 and p 0<.01 among girls.

Whilst meddling into the data one important verity to be noted was that the post training assessment was conducted during the last week of the academic year that immediately preceded the final examination period. School students in general find exam taking (Folkman and Lazans, 1985), assignment submissions and the events leading up to them like teachers rushing up with portions and notes writing as more stressful. Hence it becomes obvious that their stress score would increase post SIT. But a contradictory picture was observed among the control participants except for the private school boys.

On an average the stress mean score of all other control participants was found to decline to a value of 1 – 2, though not significant. However an informal discussion with the control participants revealed a justification of the data procured. They had urged the experimental group to share certain exercises and activities they rehearsed in the intervention out of curiosity and also practiced some of them when needed to confront their own stress. However the controls of the private boys showed an augmented stress score of 0.60 due to their final sports activities.

The results of the meta-analysis revealed by DiGuiseppe and Tafrate (2001) proved that the cognitive - behavioural SIT was "moderately successful" and the level of improvement was maintained at a follow-up period that ranged from 2 to 64 weeks. The findings of Beck and Fernandez (1998) also found that SIT treatment programmes were found to be most effective. The study done by Fontanna, Hyra, Godfrey and Cermak (1999) has concluded that students who participated in the SIT programme demonstrated lower level of stress (indicated by heart rate) at post treatment and follow-up assessment periods compared with controls.

Viewed in this manner, the experimental group's participation in the intervention served to inoculate them against the effects of stress, which was

consistent with the assumption that underlie SIT (Meichenbaum, 1985). In other words, when stressed, instead of feeling overwhelmed the experimental group had at their disposal a gamut of coping skills to implement. Controls on the other hand were more susceptible to stressors and experienced higher level of stress because they lacked the skills and knowledge to effectively manage stress. This has evidently proved that SIT intervention possibly alleviated stress among the 9th graders.

B. Impact of SIT on causative factors

Keeping this in mind separate analysis of the effect of SIT on confronting the stressors were performed with the experimental and control group in relation to gender and type of school and was sorted out and discussed. The Table XVI and focus on the pre and post SIT mean score of the seven identified causative factors and level of significance of the experimental and control group of boys and girls of government and private school respondents respectively. The Figure 13 compares the pre and post score of experimental group alone.

TABLE – XVI

PRE AND POST SIT CAUSATIVE FACTORS MEAN SCORE – GOVERNMENT SCHOOL RESPONDENTS

Factors		Gvt. Expt. Boys			Gvt. Control. Boys			Gvt. Expt. Girls			Gvt. Control. Girls		
		Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'
Teacher	Pre	7.00	1.36	4.232**	8.94	2.01	4.318**	7.26	1.75	6.347**	7.88	1.78	3.585**
	Post	4.29	1.98		5.82	2.27		4.30	1.68		6.21	2.34	
Money	Pre	6.71	1.54	5.140**	4.76	1.52	0.810Ns	4.93	.92	3.551**	5.08	1.53	0.634Ns
	Post	3.71	1.27		5.29	2.05		3.78	1.37		4.79	1.61	
Attitudes and feelings	Pre	7.07	1.49	5.664**	4.94	1.92	4.559**	5.85	1.59	5.256**	4.79	1.64	4.371**
	Post	3.57	1.74		7.35	2.21		3.96	1.48		6.54	2.02	
School work	Pre	6.64	1.08	4.837**	6.00	1.37	1.606Ns	6.52	1.34	6.889**	7.13	1.08	3.000**
	Post	3.43	1.87		4.88	2.78		3.89	1.37		5.42	2.73	
Exam	Pre	5.07	1.49	3.862**	5.53	1.66	0.267Ns	5.15	1.49	3.876**	4.88	1.51	0.991Ns
	Post	2.43	1.65		5.35	1.66		3.56	1.58		5.33	1.95	
Parents	Pre	4.43	1.09	4.702**	5.06	1.68	0.855Ns	4.70	1.38	3.876**	5.58	1.72	0.172Ns
	Post	2.21	1.63		5.59	2.03		3.11	1.65		5.67	1.86	
Friends	Pre	4.93	.73	7.155**	4.53	1.07	2.219*	5.41	.75	9.775**	4.04	.86	0.464Ns
	Post	1.93	1.27		3.82	1.51		3.07	1.21		4.21	1.44	

**** - Significant at 1% level, * - Significant at 5% level, Ns - Not significant**

TABLE – XVI (CONTD…)

PRE AND POST SIT CAUSATIVE FACTORS MEAN SCORE – PRIVATE SCHOOL RESPONDENTS

Factors		Pvt. Expt. Boys			Pvt. Control. Boys			Pvt. Expt. Girls			Pvt. Control. Girls		
		Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'
Teacher	Pre	7.44	2.41	5.550**	6.36	2.84	1.282Ns	8.08	2.90	4.026**	7.19	2.55	2.262*
	Post	4.70	2.25		5.74	2.52		3.85	2.54		5.68	3.10	
Money	Pre	3.81	1.64	.486 Ns	3.02	1.61	3.895**	2.92	1.80	0.859Ns	2.16	1.73	4.439**
	Post	3.59	1.67		4.15	1.78		3.46	1.20		4.19	1.90	
Attitudes and feelings	Pre	5.52	2.69	2.426*	4.49	2.36	1.101Ns	6.00	2.71	2.889*	5.74	2.41	0.808Ns
	Post	3.96	2.44		4.89	2.51		4.15	1.46		5.35	1.94	
School work	Pre	6.48	2.46	5.038**	5.17	2.49	0.269Ns	7.92	2.50	4.222**	6.06	2.98	0.373Ns
	Post	4.22	2.26		5.02	2.86		4.15	2.70		5.81	3.17	
Exam	Pre	6.63	2.50	4.269**	5.26	2.60	0.898Ns	7.92	2.22	5.105**	6.87	2.73	1.894Ns
	Post	3.93	2.16		4.83	2.72		3.54	2.18		5.65	2.58	
Parents	Pre	5.26	2.68	3.174**	4.49	2.14	1.584Ns	5.77	2.83	2.856*	5.10	2.30	1.038Ns
	Post	3.37	2.48		3.94	2.60		3.23	1.48		4.58	2.53	
Friends	Pre	3.19	2.15	1.247Ns	2.28	1.62	2.704**	3.54	1.98	1.877Ns	2.55	1.84	1.380Ns
	Post	2.59	1.42		3.09	1.54		2.69	1.11		3.16	1.68	

**** - Significant at 1% level, * - Significant at 5% level, Ns - Not significant**

COMPARING THE PRE AND POST SIT CAUSATIVE FACTORS MEAN SCORE OF THE EXPERIMENTAL RESPONDENTS

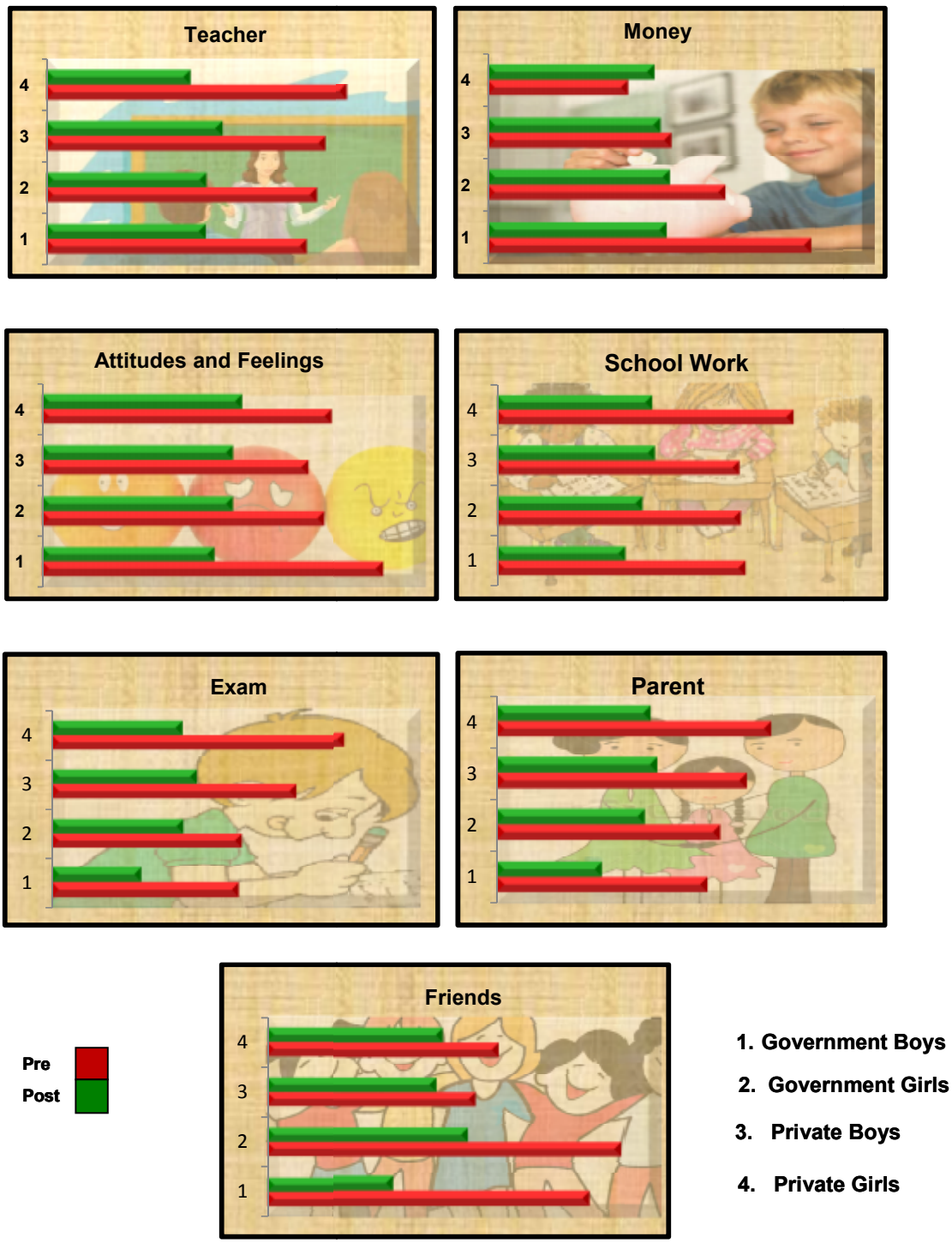


FIGURE - 13

Researchers have suggested that coping is an important protective factor in stressful situations (Zeidner and Endler, 1996). Meichenbaum and Cameron (1983) strongly suggest that exposure to SIT conveys protection from feeling overwhelmed when confronting stressors, because one has an arsenal of effective, coping techniques upon which to rely. In other words, individuals who participate in such interventions were thought to 'inoculate' themselves against future episodes of stress.

The present finding of the government school and the private school experimental respondents as illustrated in the figure vividly denotes that the beneficiaries irrespective of the gender procured a lower stress mean score on all the identified factors after SIT in comparison with the pre assessment score. The difference in mean score was found to be significant at 1 per cent level amongst all factors. In other words, the SIT package implemented for these 9^{th} graders not only trained and hoped to transfer skills among them, but also had helped them to generalize and apply the learnt skills to encounter any stressor at any point of time.

Hence the SIT aimed at building a larger repertoire of coping strategies like deep breathing, muscle relaxation, guided imagery, positive coping thoughts etc, to address their specific stressors in the vein of teacher, money, attitudes and feelings, school work, exam, parents and friends have had made a positive impact on the experimental group of students.

However, meddling into the factor money and friends a statistically significant difference between the pre and post SIT among both male and female respondents of private school was not found though they could minimize the effect of these triggers shown by a decline in the mean score.

Interfering into the data of control group as shown in Table XVI no uniform pattern of change was observed in both boys and girls. The mean score on all factors except teacher had seen either a gain or no change among the control group. However the teacher factor alone showed a significant decline in the post

assessment when compared to pre SIT score in both gender. This verity adds up to the value of research in finding out the reason.

The data of the control group of private school gives an even more interesting reading to explore. Though several of the seven identified factors after post assessment exist with the same intensity in provoking stress among the control group with slight change in their mean score, for the factor - money a profound increase in the mean score was observed among both boys and girls of private school. In other words the factor money was stressing them during the post SIT period when compared to pre SIT. Moreover the mean difference between pre and post SIT for the trigger - friends were found to be statistically significant at 1 per cent level with higher score after SIT. This fact might be related to already mentioned sports activities the boys were engaged during post assessment.

However, the finding in relation to the experimental group of both the schools among boys and girls authentically proved that SIT intervention had insulated each and every respondent from experiencing the detrimental effects of stress by encountering the causative factors.

C. Stress Indicators – pre and post

A child in a constant state of unmanaged stress is primarily focused on survival. "Continual emotional distress can create deficits in a child's intellectual abilities, crippling the capacity to learn" (Goleman, 1997). In addition to a general stressed state, specific events can create anxiety. In the classroom this often relates to performance anxiety.

A critical issue concerning stress among students was its effect on learning. The Yerkes - Dodson law (1908) postulates that individuals under low and high stress learn the least and that those under moderate stress learn the most. A field study and laboratory tests support the notion that excessive stress is harmful to students' performance. Therefore the development of effective training interventions to ameliorate the negative effects of stress on performance desires increased importance in the training. This following subsection details the effect of

SIT on the signs and symptoms experienced and behaviour manifested by the experimental respondents in comparison with control subjects.

i. Categorization of the experimental and control group based on the difference in their stress indicators level - prior and post SIT

The Table XVII and Figure 14 portrays the effectiveness of SIT in terms of stress indicator level among the experimental lot in comparison with the control respondents in confronting the stressors as and when faced after SIT and thereby reducing the frequency and number of physiological, behavioural and mental indicators.

TABLE - XVII

CATEGORIZATION OF THE EXPERIMENTAL GROUP BASED ON THE STRESS INDICATOR LEVEL - PRIOR AND POST SIT

Category	Government				Private				Total			
	Pre		Post		Pre		Post		Pre		Post	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Low (<=16)	-	-	39	95.1	14	35	39	97.5	14	17.3	78	96.3
Moderate (17-30)	37	90.2	2	4.9	16	40	1	2.5	53	65.4	3	3.7
High (>=31)	4	9.8	-	-	10	25	-	-	14	17.3	-	-
Total	41	100	41	100	40	100	40	100	81	100	81	100
Mean	27.44		11.39		22.33		8.0		24.91		9.71	
SD	2.80		2.97		12.37		5.03		9.22		4.43	
't' test	26.850**				9.344**				18.629**			

**** - Significant at 1% level,**

OVERALL CATEGORIZATION OF EXPERIMENTAL RESPONDENTS ON THE LEVEL OF STRESS INDICATOR

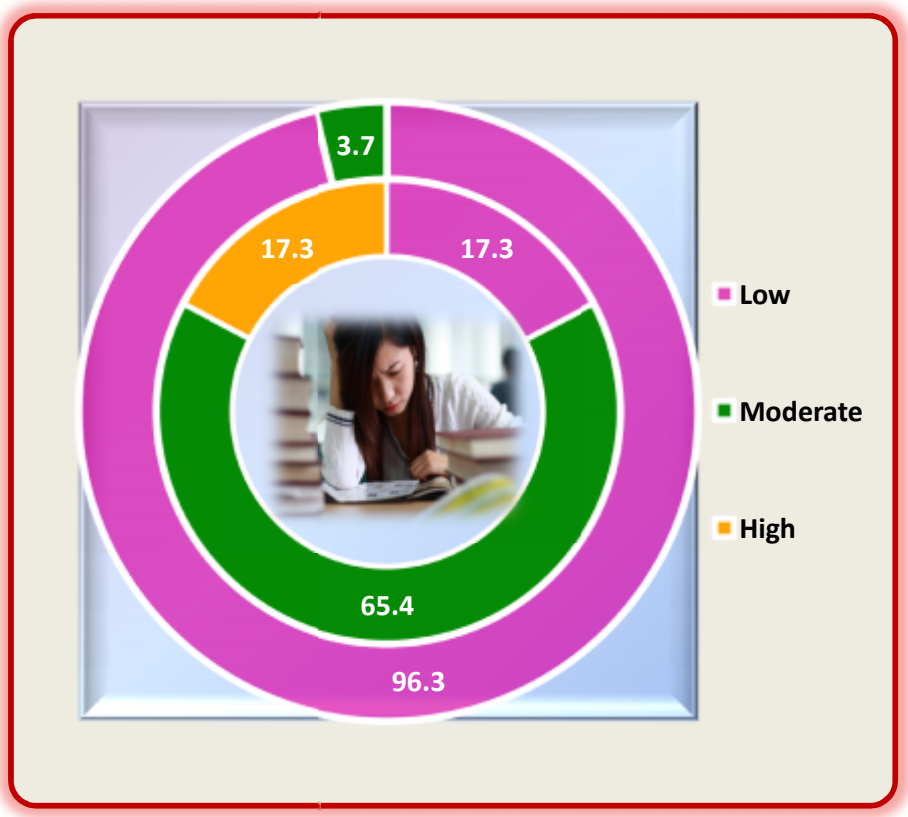


FIGURE – 14

Stress Inoculation Training which includes instruction in both cognitive and behavioural coping techniques, was particularly effective in preventing and alleviating stress related symptoms (Jorgensen, Houston and Zurawski, 1981; Cragon and Deffenbacher, 1984; Meichenbaum, 1985; Deffenbacher, 1988; Meichenbaum and Deffenbacher, 1988; Linden and Chambers, 1994). In lieu of these findings, the present finding has also proved SIT's effectiveness but among school students.

Under stress, the individual may perceive a number of intrusive physical, behavioural and mental sensations. However research has suggested that individuals under stress or novel conditions tend to over interpret stress indicators and assign a heightened importance to symptoms. The problem in case of students was not they experience these symptoms, but it was because of the novelty or unfamiliarity of these symptoms, they expend a disproportional amount of attentional capacity attending to them (Driskell and Johnston, 1998).

Congruence to the above observation, the phase one of SIT focused on preparatory information strategy, addressed how the person was likely to feel in stress setting, described the events that were likely to be experienced in the transition from normal to stress conditions and provided information on how he / she could adapt to these changes. Other two phases of SIT facilitated them to practice, retain and generalize the learned knowledge and skills.

As the figure indicates, the overall percentage (rounded off) of respondents turned down immensely from 17 per cent to none in their high level category of stress, whereas declined hugely from 65 percent to 4 per cent for the students claiming moderate mean scores on stress indicator between the ambit of 17 and 30. Subsequently, in the low level category an enormous augmentation to 96 per cent from 17 per cent was observed.

As in - depth analysis as presented in the table in relation to the institution specific differences provided facts of drastic decrease in the number of respondents categorized under high stress indicator level after SIT - four to none in government school and 10 to none in private school. Also there was decline in the number of around two students of government school exhibiting moderate indicators after SIT, which was only one with the private school.

The bump of the government school respondents from just none to 39 after SIT in the category of low stress indicator, had authenticated the optimistic impact of SIT in lessening the number and frequency of symptoms experienced and better transform in the behaviour manifested. On the whole the percentage of

respondents had a prominent increase from 17 to 96 per cent and another notable improvement from 17 to none in the low level and high level of stress indicators respectively. Further, the statistical analysis showing a significant 't' value confirms the prospects of SIT among the experimental respondents.

ii. Gender Specific and Institution Specific difference of the experimental and control group based on the mean stress indicators score prior and post SIT

As indicated earlier, the stress indicators of the present study talks about the physiological, behavioural and mental signs and symptoms experienced due to stress. This part of analysis deals with the influence of SIT on all three indicators separately in relation to gender and type of school.

The reason behind this analysis was to explore into the effectiveness of SIT into each of the specified indicator and thereby facilitating the framework of SIT for future applications. The Table XVIII and Figure 15 portrays the comparison between the scores of experimental and control group along with pre and post mean stress indicator score among the government and private school respondents.

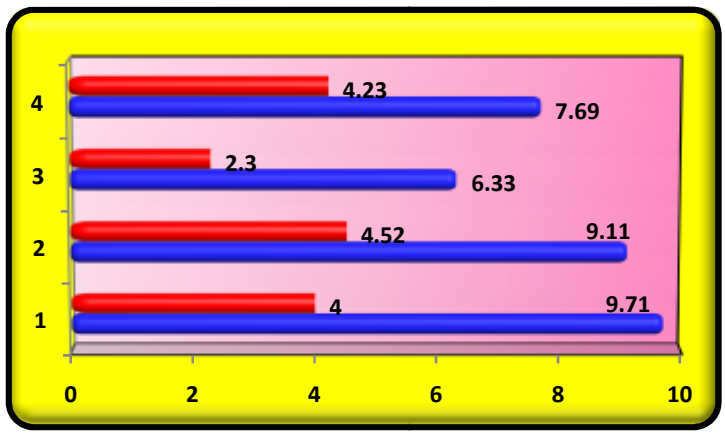
TABLE - XVIII

PRE AND POST SIT MEAN SCORES OF IDENTIFIED INDICATORS

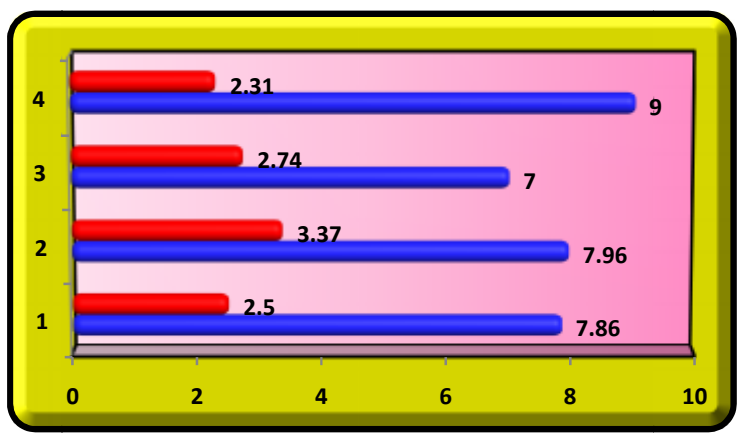
Stress indicators	Period	Government											
		Expt. Boys			Control. Boys			Expt. Girls			Control. Girls		
		Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'
Physiological Indicators	Pre	9.71	1.73	8.573**	10.00	1.41	0.054Ns	9.11	2.24	11.575**	9.83	2.55	0.091Ns
	Post	4.00	1.84		10.06	3.86		4.52	1.76		9.75	2.88	
Behavioural Indicators	Pre	7.86	1.41	8.225**	8.53	1.46	1.206Ns	7.96	1.32	12.790**	8.58	1.53	0.712Ns
	Post	2.50	1.99		9.65	3.33		3.37	1.36		8.08	2.76	
Mental Indicators	Pre	10.00	2.32	9.496**	10.06	2.54	0.408Ns	10.30	2.05	9.593**	9.88	2.46	0.072Ns
	Post	2.93	1.86		10.41	3.92		4.52	1.91		9.92	3.28	
Overall	**Pre**	**27.57**	**3.13**		**28.59**	**2.45**		**27.37**	**2.68**		**28.29**	**3.42**	**0.435Ns**
	Post	**9.43**	**3.20**	**16.149****	**30.12**	**9.57**	**0.664Ns**	**12.41**	**2.31**	**24.448****	**27.75**	**5.78**	
Private													
Physiological Indicators	Pre	6.33	4.29	5.599**	3.04	3.04	4.348**	7.69	3.73	2.843*	4.65	2.71	2.840**
	Post	2.30	2.09		5.38	3.86		4.23	2.68		6.52	4.12	
Behavioural Indicators	Pre	7.00	3.87	6.613**	4.04	3.11	1.330Ns	9.00	3.81	7.200**	5.74	4.21	0.240Ns
	Post	2.74	1.95		4.77	3.09		2.31	1.44		5.55	3.85	
Mental Indicators	Pre	7.26	5.35	5.947**	4.19	4.76	1.640Ns	9.23	4.59	5.677**	5.55	4.41	1.632Ns
	Post	2.44	2.55		5.47	4.15		2.54	1.20		6.87	3.93	
Overall	**Pre**	**20.59**	**12.76**	**6.961****	**11.28**	**9.71**	**2.740****	**25.92**	**11.10**	**6.482****	**15.94**	**10.44**	**1.619Ns**
	Post	**7.48**	**5.73**		**15.62**	**9.92**		**9.08**	**3.01**		**18.94**	**10.35**	

*** * - Significant at 1% level, Ns - Not significant**

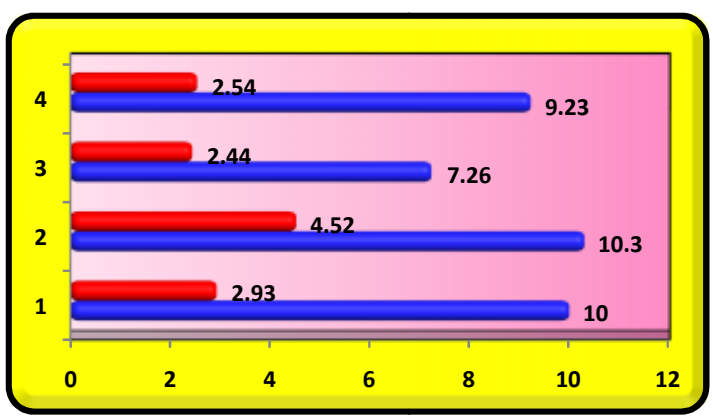
COMPARISON OF PRE AND POST SIT INDICATOR MEAN SCORES OF THE EXPERIMENTAL GROUP



Physiological



Behavioural



Mental

Pre Post

1. Government Boys
2. Government Girls
3. Private Boys
4. Private Girls

FIGURE - 15

In the initial conceptualization phase of SIT the students understanding and awareness of the nature and impact of their stress and coping resources were enhanced. A collaborative working relationship was established between the students and the trainer. This relationship provides the basis, or the "glue," that allowed and encouraged the students to confront stressors and their stress induced indicators and responses.

Further, implementation of a variety of coping skills within the training sessions facilitated them to develop a gamut of coping repertoires namely, relaxation tips, deep breathing, muscle relaxation, guided imagery, positive thoughts etc. The final application and follow - through phase of SIT they were made to realize by a variety of simulation methods that acceptance – based coping strategies to be appropriate for situations that cannot be altered, while more active interventions to be appropriate for more changeable stressors.

The part of the table that talks about the overall stress indicator score shows a remarkable decline in the average mean score on stress indicator as reported post SIT in comparison with pre SIT (i.e., Government boys – 27.57 to 9.43 and Government girls – 27.37 to 12.41; Private boys – 20.59 to 7.48; Private girls – 25.92 to 9.08). Also the statistically tested 't' value of $p<.01$ provides evidence that the SIT intervention has provided knowledge to the students regarding appropriate manifestation of physiological, behavioural and mental symptoms as response to stress.

Moreover, the mean scores of the experimental group on every indicator - which examined the physiological, behavioural and mental (with reference to gender and type of school) both prior and after SIT had brought into being that the mean scores has reduced significantly for all the four experimental groups (government boys, government girls, private boys and private girls).

This verity was also proved statistically significant 't' value at one per cent level except for the physiological indicator of private experiment girls which was found to be significant at five per cent level. Further the horizontal bars of the

figure clearly illustrate the difference in mean scores with respect to pre and post SIT for all the four group of respondents in all three indicators.

The table also analysed the mean score of the control group of respondents and it was found that pre and post the mean score did not vary much shown by insignificant 't' value. In the other words, the indicators – physiological, behavioural and mental - exhibited by the student subjects of control group remained more or less same. The control group of government school, though the 't' value was not significant, showed more or less difference in their mean stress indicator score. Whereas, the 't' value of the control group of private boys was found to be significant at one per cent level, which could be explained by the observation of the mean scores showing a remarkable rise post SIT.

With reference to clarification of hypothesis numbered H_b2 that states 'the SIT does not reduce the number of signs and symptoms experienced and behaviour manifested (in terms of stress indicators) among the selected beneficiaries', the present finding provides a strong substantiation to refute it. Hence SIT had authentically made a positive impact on the students bringing down their number and intensity of stress indicator and thereby had freed them from the sufferings of stress.

In sum, the SIT intervention have had proved its efficacy by evidently showing reduced stress levels, decreased stress indicator level (i.e.) better physical and mental health and desired behavioural change among the experimental group of students. Thereby, a part of the general objective was accomplished.

IV. RETENTION POTENTIAL OF SIT IN TERMS OF OVERALL WELL – BEING

The term 'student well - being' was now well used in education circle, tending now to replace terms such as 'student welfare' or 'student health'. The term has been adopted because it encompasses more than the notion of physical and mental health. Student's well - being had been an essential factor for both academic and social development and had been optimized by the provision of safe, supportive and respectful learning environments. Schools share this responsibility with the whole community. Well – being not only boosts confidence but also helps adolescents to perform better academically. These skills can also contribute to the creation of strong social bonds and supportive communities, and the maintenance of healthy relationships and responsible lifestyles (Farrelly, 2012).

In the educational context, well - being has been identified as both an outcome and a process which facilitates children's progression towards learning and development outcomes (Mashford, 2012). The well - being of the school students of the present study were appraised with three indicators namely adaptation through resilience, practice of stress coping repertoires and improved academic performance by these adolescents. The retention potential of the SIT intervention as a whole was assessed by comparing the pre SIT and the post SIT data collected after a period of six months on these indicators and were discussed under the following heads

A. Retention potential of SIT on resilience

B. Retention potential of SIT on stress coping repertoires

C. Retention potential of SIT on academic performance

A. Retention potential of SIT on resilience

The concept of resilience and it relationship with stress is still new and the research is in progress. The ability to resist, to bend and not break or to bounce back and recover were all components of resilience. Though, there was no consensus in the literature of the factors that facilitate a person to be resilient, the

study identified seven factors that could improve and transform a person's adaptation to stress and thereby predating better physical and psychological adjustment. The blue print of SIT invention was framed in such a way that the characteristics that promote resilient functioning among school students was all encompassed in the package. A detailed account of the retention potential of SIT in terms of resilience was discussed under the following heads

i. Government school

The Table XIX and Figure 16 illustrates the retention potential of SIT in terms of resilience of the experimental and control group with their gender specific differences by comparing the mean score procured between pre and six months post SIT.

TABLE - XIX

RESILIENCE OF THE EXPERIMENTAL AND CONTROL GROUP - PRIOR AND POST SIT

Groups		Gvt. Expt. Boys			Gvt. Control. Boys			Gvt. Expt. Girls			Gvt. Control. Girls		
		Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'
Vision	Pre	0.21	0.43	8.272**	0.35	0.61	1.000Ns	0.52	0.58	9.976**	0.38	0.49	0.569Ns
	Post	1.64	0.50		0.41	0.62		1.78	0.42		0.42	0.50	
Determination	Pre	0.57	0.51	10.494**	0.71	0.59	NA	0.67	0.73	10.732**	0.63	0.88	NA
	Post	2.29	0.73		0.71	0.59		2.48	0.70		0.63	0.88	
Interaction	Pre	0.64	0.74	4.163**	0.76	0.66	NA	0.52	0.64	9.007**	0.29	0.46	1.813Ns
	Post	1.50	0.76		0.76	0.66		1.67	0.55		0.42	0.58	
Relationships	Pre	1.21	1.19	6.204**	1.06	0.66	1.376Ns	1.44	1.19	10.101**	0.88	0.68	2.005Ns
	Post	3.36	0.74		1.24	0.83		3.56	0.51		1.08	0.78	
Problem solving	Pre	0.79	0.58	8.629**	0.88	0.86	1.461Ns	0.74	0.98	10.036**	0.79	0.72	1.446Ns
	Post	2.29	0.91		1.00	0.87		2.67	0.62		0.88	0.80	
Organisation	Pre	0.71	0.61	9.099**	0.65	0.70	NA	0.74	0.76	10.361**	0.42	0.72	1.000Ns
	Post	2.29	0.83		0.65	0.70		2.52	0.75		0.46	0.78	
Self-confidence	Pre	0.71	0.73	7.071**	0.47	0.72	1.000Ns	0.63	0.63	10.096**	0.54	0.59	1.000Ns
	Post	2.14	0.86		0.53	0.72		2.19	0.83		0.63	0.71	

**** Significant at 1 % level, Ns - not significant, NA - not applicable**

DIFFERENCE IN MEAN SCORE ON RESILIENCE AMONG THE EXPERIMENTAL RESPONDENTS

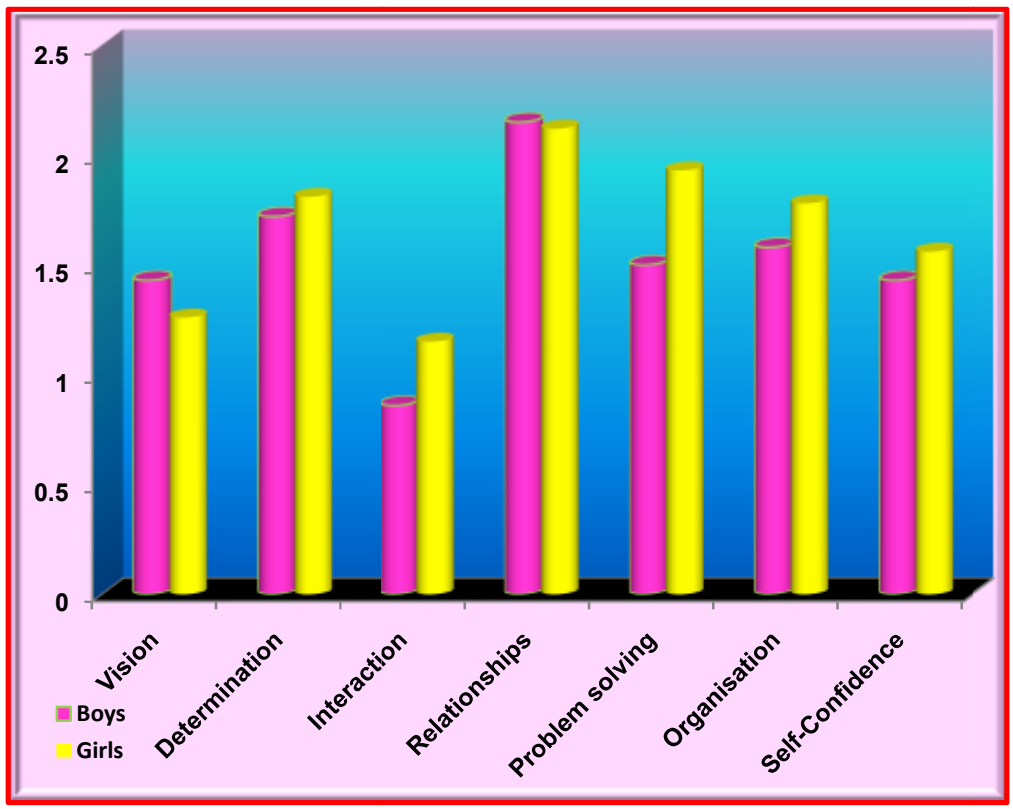


FIGURE – 16

The results indicated by the research data of the respondents enrolled in government school have been used to test whether SIT affects resilience by using descriptive statistics (mean and standard deviation). The table presents the mean score on seven aspects of resilience of both the experimental and control group (boys and girls). The comparison of pre and post mean score of the experimental group of both the gender gives a clear picture of drastically augmented mean scores after SIT. To elaborate, the mean scores of boys in the area of vision has increased from 0.21 to 1.64, determination from 0.57 to 2.29, interaction from 0.64 to 1.50, relationships from 1.21 to 3.36, problem solving from 0.79 to 2.29, organization from 0.71 to 2.29 and self – confidence from 0.71 to 2.14 and for girls vision from 0.52 to 1.78, determination from 0.67 to 2.48, interaction from 0.52 to

1.67, relationships from 1.44 to 3.56, problem solving from 0.74 to 2.67, organization from 0.74 to 2.52 and self – confidence from 0.63 to 2.19 and the 't' - value was also found to be significant at 1 per cent level for each and every area of resilience.

But the mean scores of the control group did not demonstrate considerable change. This finding brought out the fact that the control group stayed the same in their awareness as they were six months before.

Looking into the illustration showing the difference in the mean score among the experimental students (boys and girls) from pre to post SIT, the most preferable resilient factor for both the gender was relationships and least preferable aspect was interaction. The present finding can relate to one important truth that high school was the time that the students were to make decisions about their course taking and future educational and career plans. It was also being considered as the time when parental authority was being challenged by peer pressure. The influence of peers could serve as an important incentive for adolescents to perform well in school. The result also had showed that the students are likely to less interact with their teachers or parents. However, the above findings have had genuinely proved that the SIT deliberated for high school students had facilitated the experimental respondents to possess the ability to adapt to stressful situations through resilience.

ii. Private School

The Table XX and Figure 17 presents the pre and post SIT mean score on seven aspects of resilience of the experimental and control group of both the gender enrolled in private school and the difference in pre to post SIT mean score among experimental respondents respectively.

TABLE - XX

RESILIENCE OF THE EXPERIMENTAL AND CONTROL GROUP BASED ON THE STRESS LEVEL PRIOR AND POST SIT

Groups		Pvt. Expt. Boys			Pvt. Control. Boys			Pvt. Expt. Girls			Pvt. Control. Girls		
		Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'
Vision	Pre	0.29	0.46	12.145**	0.50	0.62	NA	0.50	0.52	8.883**	0.57	0.70	0.443**
	Post	1.75	0.44		0.50	0.62		1.88	0.34		0.55	0.73	
Determination	Pre	0.92	0.83	8.108**	0.74	0.93	NA	1.19	0.83	9.934**	0.66	0.71	1.431**
	Post	2.46	0.83		0.74	0.93		2.75	0.45		0.70	0.73	
Interaction	Pre	0.63	0.58	8.177**	0.44	0.66	NA	0.75	0.68	5.196**	0.45	0.59	NA
	Post	1.67	0.56		0.44	0.66		1.50	0.63		0.45	0.59	
Relationships	Pre	1.17	1.20	10.486**	1.06	0.98	NA	1.13	0.96	10.115**	1.23	1.05	1.000Ns
	Post	3.50	0.88		1.06	0.98		3.56	0.51		1.20	1.07	
Problem solving	Pre	0.71	0.69	10.346**	1.00	0.95	1.000Ns	1.06	0.68	9.586**	0.91	0.77	1.000Ns
	Post	2.54	0.59		1.03	0.94		2.75	0.45		0.95	0.81	
Organisation	Pre	0.96	0.86	7.880**	0.59	0.56	NA	0.88	0.81	5.578**	0.52	0.59	1.000Ns
	Post	2.46	0.78		0.59	0.56		2.31	0.70		0.50	0.59	
Self-confidence	Pre	1.04	0.69	7.695**	0.62	0.70	NA	1.00	1.03	6.446**	0.75	0.61	NA
	Post	2.42	0.65		0.62	0.70		2.44	0.73		0.75	0.61	

**** Significant at 1 % level, Ns - not significant, NA - not applicable**

DIFFERENCE IN MEAN SCORE ON RESILIENCE AMONG THE EXPERIMENTAL RESPONDENTS

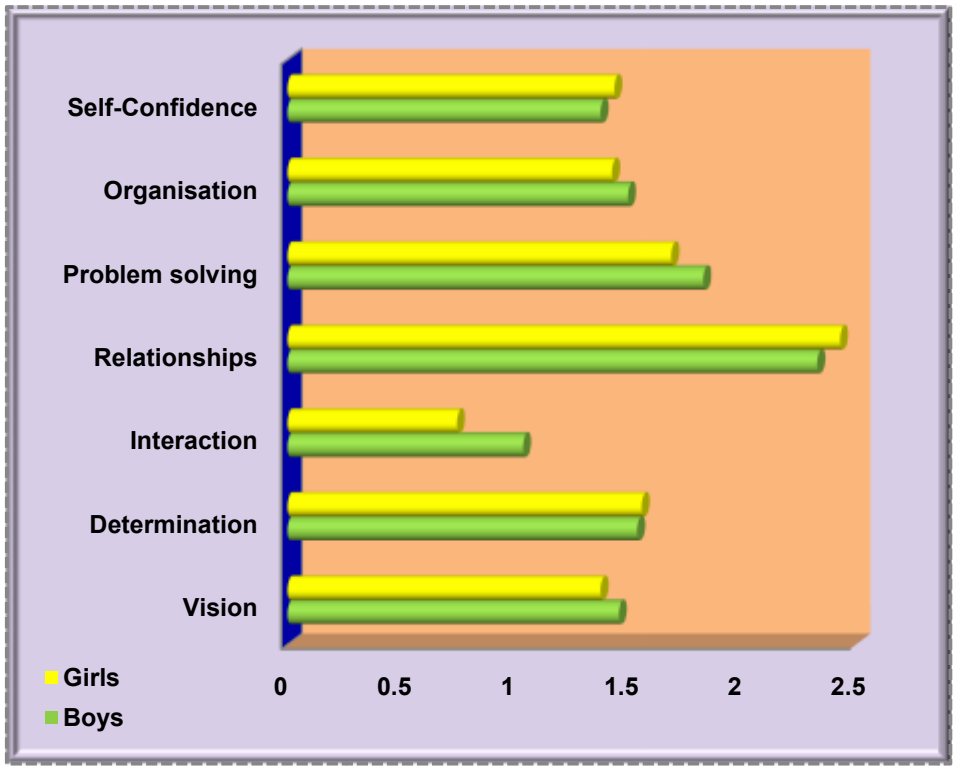


FIGURE – 17

A uniform trend of drastic augmentation in mean score of the experimental group from pre and post SIT (6 months after SIT) as that of the government school respondents was observed in each and every area of resilience. Also the 't' value calculated for each arena authenticates that the SIT has brought out a long lasting positive impact on the beneficiaries by having their resilience skills.

Whereas the control group mean scores did not demonstrate any considerable change, which brings out the fact that they remained the same in their resilient ability as they were six months before.

Hence, SIT framework tailored to the needs of the 9th graders had instilled the ability to make connections in terms of better relationships with his / her close family members and friends and also had facilitated them to get support by

reclaiming hope from those who care him / her. Also the SIT had registered an important fact that they could never change or alter stressful events from that happening to them, but could only change their way of interpreting and responding appropriately to them. Subsequently, the respondents also learnt to face stress situation by putting it in a broader context with a long term perspective by not allowing it to get out of proportion. These qualities in turn had for sure developed confidence in their ability to solve their routine problems and began to trust their instincts that helps build resistance.

On the whole, this section substantiates that the beneficiaries of SIT do have the ability to retain the crux of the intervention in their level of resilience even after six months of SIT. ***Therefore the hypothesis numbered, H_b3 that had stated that 'the retention potential of SIT in terms of resilience was not observed among the selected beneficiaries' had to be strongly refuted.***

B. Retention potential of SIT on stress coping repertoires

The current research considered coping repertoire as a trait, and postulated a mechanism through which it impacts appraisal on the students well - being. Coping repertoire is the extent to which adolescents rely on multiple coping strategies during the confrontation of a stressful episode. Thus, the coping repertoire concept captures the breadth of individuals' coping efforts and assesses the relative propensity of individuals to employ multiple coping options in response to dynamic situational elements of a stressful episode.

The Table XXI and Figure 18 projects the retention potential of SIT in terms of stress coping repertoires of the selected students based on the mean scores procured prior and post SIT among the control and the experimental group of student subjects enrolled in the selected schools.

TABLE - XXI

PRE AND POST SIT MEAN SCORE ON STRESS COPING REPERTOIRES AMONG THE SELECTED STUDENTS

Period	Government											
	Expt. Boys			Control. Boys			Expt. Girls			Control. Girls		
	Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'	Mean	S.D	't'
Pre	10.50	1.87	16.420**	11.06	3.45	1.725Ns	10.22	2.47	25.262**	9.71	3.98	1.682Ns
Post	23.29	2.79		11.29	3.58		23.26	2.88		9.96	3.95	
Private												
Pre	10.79	2.60	27.958**	11.88	3.72	1.928Ns	9.69	1.99	22.620**	11.70	3.66	1.666Ns
Post	26.46	2.38		11.18	3.71		25.38	2.09		11.98	3.78	

OVERALL MEAN SCORE ON STRESS COPING REPERTOIRES

Overall Mean Score	Experimental Boys			Experimental Girls		
	Mean	S.D	t value	Mean	S.D	t value
Pre	10.68	2.34	28.981**	10.02	2.29	30.858**
Post	25.29	2.94		24.05	2.79	

**** Significant at 1 % level, Ns - not significant**

COMPARISON OF THE PRE AND POST SIT MEAN SCORES OF THE EXPERIMENTAL GROUP ON STRESS COPING REPERTOIRES

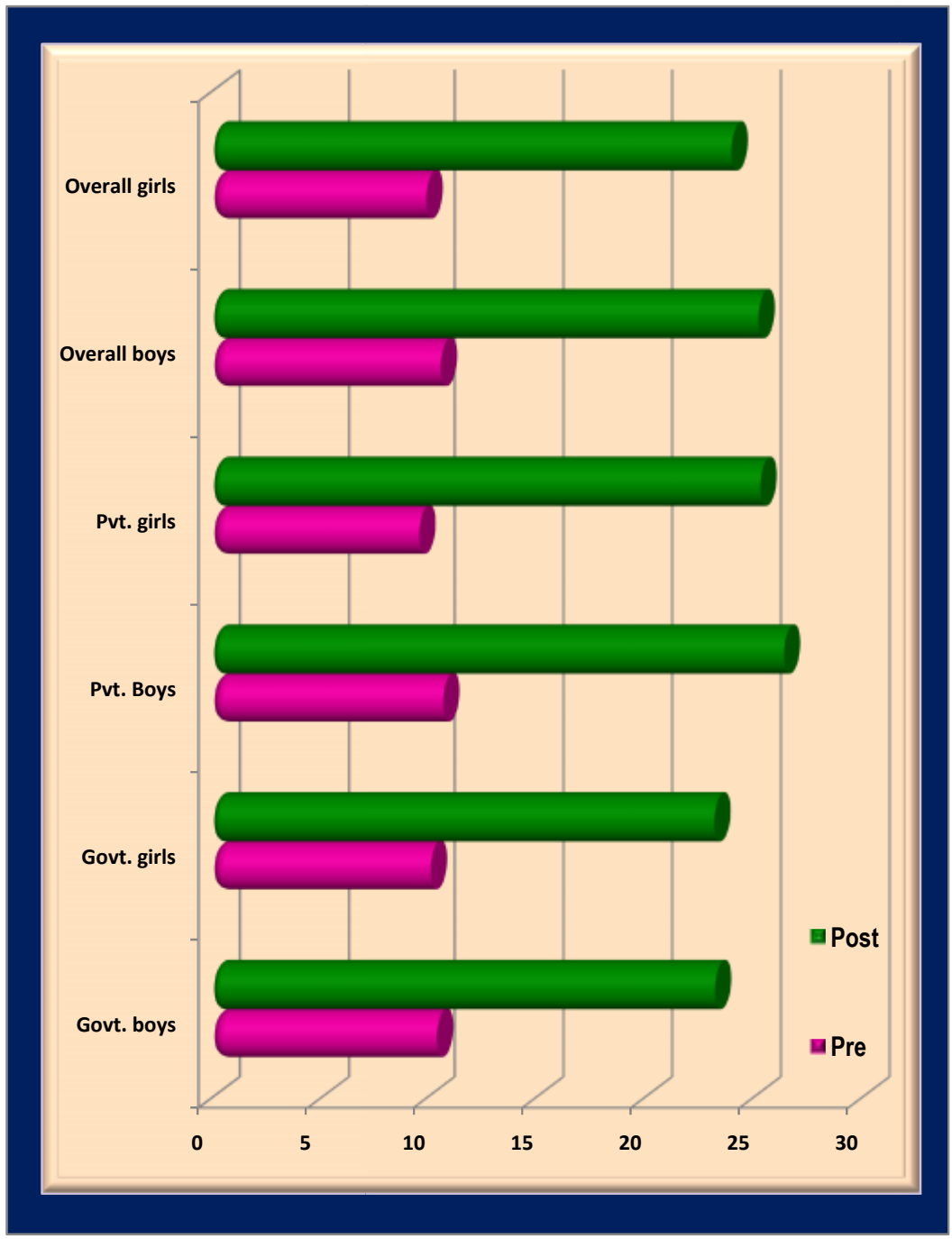


FIGURE - 18

The overall mean score of the experimental respondents of government school among boys from 10.50 to 23.29 and girls from 10.22 to 23.26 on the identified seven areas of stress coping repertoires namely relaxation techniques, deep breathing, muscle relaxation, guided imagery, toolbox of positive coping thoughts, changing negatives into positives and time management was found to increase significantly from their pre score. This verity was further authenticated by highly significant t value among both boys and girls.

In the same way, the post SIT score obtained after six months of SIT of the experimental boys and girls of private school had seen an increase when compared to pre SIT mean score (boys from 10.79 to 26.46 and girls from 9.69 to 25.38).

The comparison of pre and post of mean score of the control group irrespective of the gender and the type of institution did not have much difference and their 't' - value was also found to be not significant. This finding proves the fact that the control group remained the same compared to their counterpart before and after SIT.

The horizontal bars in the figure vividly portrays the pre and post SIT mean scores of the experimental respondents in relation to the gender and type of school they are enrolled into. The score from pre and to post have drastically increased being evidently shown by the lengthier green bars. This fact in turn proves that SIT could maintain its own retention potential by bringing in a perceptual change among the student population by facilitating them to practice the relaxation and cognitive strategies provided to them during the SIT intervention.

An informal chat with the beneficiaries brought out into being, four core strategies practiced by them namely deep breathing (76%), muscle relaxation (71%), guided imagery (67%), turning negatives into positives (62%). When probed further, they opened that these three strategies were easy to adapt and practice. In lieu with this finding, an extensive study has to be made as a follow up

of this current research to track other coping strategies to an easy mode, so that every strategy was being used by the student population effectively.

The SIT has made a remarkable potential among the students, which was further supported by a statement of a student respondent

"*I get very angry when I had to complete all work at a time (like submitting assignments, facing two exams the same day and completing record work). So, I don't do anything and had to face its own consequences. But after SIT, I learnt to frame a realistic time table of what and when I should do my jobs, prioritize and then follow it strictly. But if anything goes out of control I spend some 10 – 15 minutes practicing deep breathing exercises and then think of some of my positive qualities which in turn would give me confidence to face my stress and cope it. Now I can face too much load of work with ease."*

Many of the student beneficiaries shared their experiences in lieu with the above statement which had provided the investigator a great deal of happiness and satisfaction to continue the SIT intervention to benefit other student population. ***Hence, the data relevant to the coping repertoires has authentically proved that SIT was efficacious in retaining the potential of the student respondents in coping with stress by possessing a gamut of stress coping skills and using it whenever needed. Thereby the hypothesis H_b4 had to be strongly rejected.***

C. Retention potential on academic performance

Results of a meta-analysis by Saunders, Driskell, Johnston and Salas (1996), indicated that Stress Inoculation Training (SIT) was an effective means in enhancing performance under stress. Hence the SIT intervention designed with three phases was tested for its impact on the academic performance of the student subjects.

Test taking / exams can produce elevated stress and anxiety, with subsequent negative influence on test/exam performance (Xiao, 2013). Also the multiple regressions carried out by Xiao, indicate that academic stress was

positively related to student's test anxiety and negatively related to their academic performance. In lieu of this finding the present study wanted to enhance the academic performance of the high school students.

SIT is a form of cognitive restructuring as it was a method of changing an individual's thinking patterns about themselves and their lives. The aim was to change their emotional responses and their behaviour ideally before the individual becomes very anxious or depressed as a result of stress.

Academic stress was determined by students' perceptions of their academic performance or achievement. Jones Sears and Milburn (1990) define three stress clusters: test anxiety, fear of success or failure, and fears associated with the school setting, which can include school phobia as the most extreme form. Test anxiety was mentioned very often with respect to school stress. ests were one of the most frequent school - based sources of stress (Bauwens and Hourcade, 1992).

The academic performance was summarized by calculating the total marks scored in an exam and converting into percentage for both the experimental and control group of students in both the selected government and private schools. The percentages were then categorized into four divisions as specified in the methodology. The academic performance prior SIT (Half - yearly marks) was compared with post - 1 of SIT (Annual marks) to measure the impact of the intervention. Also the post - 1 was compared with post - 2 (Quarterly marks of the same lot of students in their next grade) to analyse the retention potential of SIT.

The Table XXII and Figure 19 exclusively compares the number of students of the experimental and the control group under each category of mean percentages prior, post - 1 and post - 2 of SIT applicable to the type of school.

TABLE – XXII

ACADEMIC PERFORMANCE OF THE CONTROL AND THE EXPERIMENTAL STUDENTS PRIOR, POST - 1 AND POST - 2 OF SIT BASED ON THE TYPE OF SCHOOL

Stages of assessment	Government																Private													
	Control (41)								Experimental (41)								Control (78)								Experimental (40)							
	20-40		40-60		60-80		80-100		20-40		40-60		60-80		80-100		20-40		40-60		60-80		80-100		20-40		40-60		60-80		80-100	
	30		50		70		90		30		50		70		90		30		50		70		90		30		50		70		90	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Pre	7	**17**	12	**29**	20	**49**	2	**5**	5	**12**	22	**54**	12	**29**	2	**5**	10	**13**	26	**33**	36	**46**	6	**8**	2	**5**	20	**50**	17	**42**	1	**3**
Mean	**58.29**								**55.37**								**59.74**								**58.5**							
S.D	**16.72**								**14.85**								**16.35**								**12.72**							
Post – 1	9	**22**	10	**24**	21	**52**	1	**2**	2	**5**	14	**34**	20	**49**	5	**12**	12	**15**	24	**31**	39	**50**	3	**4**	1	**3**	12	**30**	25	**62**	2	**5**
Mean	**56.83**								**63.66**								**58.46**								**64**							
S.D	**17.09**								**15.13**								**15.96**								**12.15**							
Post – 2	8	**20**	9	**22**	23	**56**	1	**2**	1	**2**	10	**24**	24	**59**	6	**15**	11	**14**	21	**26**	42	**54**	4	**6**	-	**-**	4	**10**	31	**78**	5	**12**
Mean	**58.29**								**67.07**								**60**								**70.5**							
S.D	**16.72**								**13.83**								**16.03**								**9.59**							

Percentages were rounded off

MEAN MARK PERCENTAGES OF CONTROL AND EXPERIMENTAL GROUP BASED ON THE TYPE OF SCHOOL

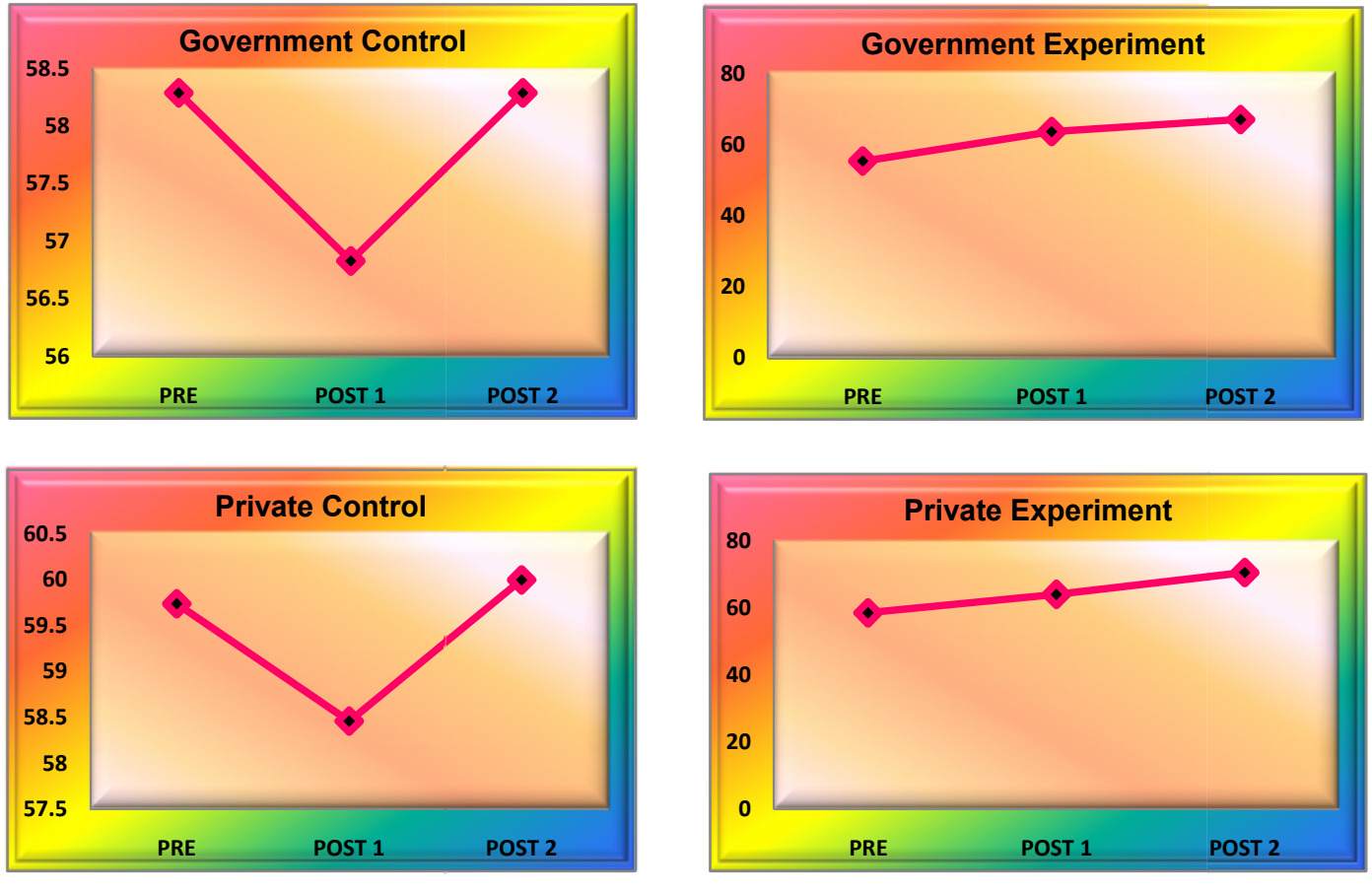


FIGURE - 19

The table coherently explains the amplification in the number of experimental students of both the government and the private in the category of 60 - 80 per cent and 80-90 percent from prior to post - 1 of SIT and then again to post - 2 of SIT (Government - 60 - 80% - 12 to 20 and again 24 students, 80 - 100% - 2 to 5 and again to 6 students; Private - 60-80% - 17 to 25 and again 31 students, 80 - 100% - 3 to 5 and again to 13 students respectively).

Subsequently, a decline in the number of students of the experimental group in the categories of 20 - 40 per cent and 40 - 60 per cent has been observed in the government as well as private school from pre to post - 1 and post - 1 to post - 2 (Government - 20 - 40% - 5 to 2 and again 1 student, 40 - 60% - 22 to 14 and again to 10 students; Private - 20 - 40% - 2 to 1 and none, 40 - 60% - 20 to 12 and again to 4 students).

This finding undoubtedly demonstrates that the SIT intervention has not only made a positive impact on the academic performance of the trainees but also had established the retention potential of the intervention even after six months, ***therefore the hypothesis numbered H_b5 that stated 'the retention potential of SIT in terms of improved academic performance was not observed among the selected beneficiaries' was strongly rejected.***

The mean marks corresponding to the median of every category were calculated for both the experimental and control group with reference to the type of school and plotted in Figure 19. On the sum total, the mean marks of the government school control respondents were 58 to 57 and then to 58 and private school control respondents were 58 to 60 and then to 62 during pre, post - 1 and post - 2 of SIT. While, the experimental group had shown an intensification of their mean marks from pre to post - 1 and from post - 1 to post - 2 of SIT (government – 55 to 64 to 67; private 59 to 64 to 71).

The line plot of the graph obviously shows that the mean marks of prior, post - 1 and post – 2 - of the control group of both the type of schools do not follow a stable pattern of rise or decline. Whereas, the experimental group pursued a steady rise in the mean marks. This finding evidently proves that the

improvement in the academic performance of the students who underwent the intervention was only due to SIT.

Put together, the above findings on the indicator overall well being in terms of adaptation through resilience, possessing gamut of stress coping repertoires and enhanced academic performance proved that the SIT premeditated exclusively for 9th graders was efficacious in fostering their well - being. Therefore the later part of the general objective of the present study was accomplished.

V. FEEDBACK OF THE BENEFICIARIES

The SIT adapted specifically for the student population of the high school has positively made an impact on managing their stress. The efficacy of the intervention was also verified by the data acquired through the feedback form from the students. The following section contains the information about the feedback data. The Table XXIII portrays the respondents' general feedback of the training programme.

TABLE – XXIII

FEEDBACK OF STUDENTS

Statements	To a large extent		To some extent		Not at all	
	No.	%	No.	%	No.	%
Usefulness of the programme	200	100	-	-	-	-
Understand the stress concepts	190	95	10	5	-	-
Enjoyed the activities	200	100	-	-	-	-
Trainer attended to queries	184	92	16	8	-	-
Effectiveness of trainer	181	90	19	9	-	-
Learnt the coping skills	167	83	33	16	-	-
Training contributed to self- development	200	100	-	-	-	-
Enhanced confidence to handle stress	155	77	45	22	-	-
Liking to participate in such training further	200	100	-	-	-	-

It was observed from the table that all of the students who participated in the intervention felt that the programme was useful, and thereby could contribute to their self development in their future. Also each and every student enjoyed the activities of the training and expressed their willingness to take up such training later.

More than 90 per cent of the students were positive about the trainer's effectiveness of teaching coping skills and her responsibility of attending to their

queries and difficulties. Ninety five per cent of them could understand the concepts of stress and its coping strategies dealt during the intervention.

The open ended question posed on the students provided freedom to put in their views of the intervention elaborately. The data consolidated reveals that 73 percent of the students after the intervention learnt four coping skills namely deep breathing, muscle relaxation, guided imagery and positive thoughts thoroughly. However 77 percent of them expressed their confidence in using the learnt coping skills. The informal chat of the investigator with the students has revealed that many of the students were fascinated by guided imagery technique.

The changes that the respondents could see in themselves was also probed and the data indicated some important positive changes namely division of time for not rushing up with jobs at the last minute (88%), accepting their teacher for what they are (68%), looking things from their parent's perspective and trying to meet their objectives (57%), deriving satisfaction in the work done and learning to have fun in daily jobs (66%), better health (78%),and boosted confidence to approach their teacher without fear (46%).

One more interesting feedback given by the participants in their overview was that 54 percent of them had laminated the chart paper that was used during the three day training session encompassing their details of who they were, their likes and dislikes, what they want to be in future, how were they going to achieve it, what would be their strategies to accomplish the goal, the good qualities they wanted to enhance and the bad qualities that they wanted to get rid of. This chart paper kept either in their living room or bed room serves as a driving force for them to look into their future with perseverance.

Also the informal chat during the follow-up – 2 revealed that many of the students were still maintaining their stress diary. Ninety eight per cent of the respondents rated the intervention programme as excellent. Hence the feedback of the respondents also provides evidence of the effectiveness of SIT.

Also the investigator trade attempt to procure an overall feedback from the parents and teachers of the experimental group of student subjects by means of friendly conversation.

The parents who were approached for feedback expressed that they could observe certain positive changes among their children after SIT. The first changes specified were that their children got into the habit framing timetable to work and hence don't bother them with last minute hassles (72%). The second change was that some of these children could get along with their siblings particularly younger one (61%) and hence the frequency and intensity of sibling conflicts has gone down. The third important change mentioned by the parents was the improvement in academic performance (42%). More than half of the parents confronted expressed their delight over the chart paper designed by the child during the training session as it serves as a motivating factor for them.

The teacher also expressed certain changes among the students who underwent the training programme. Some of them were changed attitude of maintaining silence in the class room (39%), respecting teachers (36%), finishing off their assignments on time (40%) and even to a little extent of better academic performance (14%). In precise, the feedback from the experimental respondents (students) had established the effectual nature of the scrumptiously designed SIT. Also the parents and teachers feedback of SIT was found to bear a positive note on the intervention.