

RESULTS

*Become the master of your mind,
rather than letting the mind master you.*

- Nichiren Daishonin

CHAPTER IV

RESULTS

4.0. INTRODUCTION

The present research was carried out to examine the effectiveness of a therapeutic package on aggressive adolescents. The package comprised of Rational emotive therapy, Social skills training and a combined treatment of both. These were applied exclusively to three different aggressive population. The result section has tried to analyse whether the application of these therapies have been able to produce any effect or change. In this regard a before and after treatment comparison with a control group have been made. Another section of the chapter has tried to draw comparative analysis between genders and their tendencies to respond aggressively. Lastly, simple frequency distribution percentages have been analyzed in relation to birth order and family patterns of the aggressive adolescents. This chapter puts forth the findings of the study, against the research objective defined in Chapter III.

4.1. ANALYSIS OF RESULTS : EXPERIMENTAL AND CONTROL GROUPS

To ensure standard comparison base inventory was kept the same towards the overall analysis in the study, for all the participants. This base was the Buss-Durkee Inventory of Aggression. The population showing aggressive scores were exposed to the therapeutic interventions. Effectiveness was measured, through evaluation of pre and post test scores on the scale. While the statistical analysis involved the usage of paired and independent '*t*-tests'. Results have been presented in the section below :

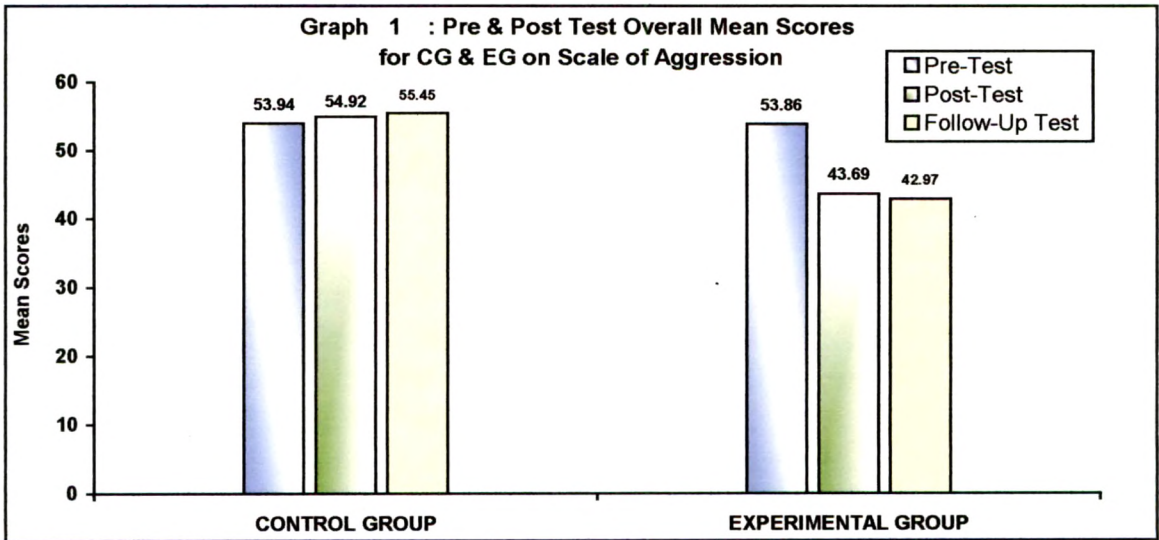
4.1.1 Comparative Analysis of CG and EG : Overall Aggression Scores

The results here, tried to compare the overall average scores on aggression of the CG and EG groups. Table 10 is making a presentation of these results :

Table 10 : Pre and post test comparisons of CG and EG on overall aggression

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	53.86	2.78	43.69	3.05	42.97	2.84
CG	53.94	3.05	54.92	2.79	55.45	2.71

The maximum score which could be obtained in BDI was 75. In the case of EG pre and post test reveal remarkable decline in mean scores from 53.86 (S.D : 2.78) to 43.69 (S.D : 3.05). Though in the control group mean scores has slightly risen from 53.94 (S.D : 3.05) to 54.92 (S.D : 2.79). The follow up results showed overall means score at follow ups as 55.45 (S.D : 2.71) for CG. In case of EG, the overall mean score remained relatively stable, revealing a mean value of 42.95 (S.D : 2.84). Thus forth, showing the impact of therapy, even after a detention interval. The graph below depicts clearly these striking changes in the respective mean scores. The ‘t’ test evaluated a significant difference between the control and experimental groups, revealing a value of 16.28 at (df = 35) at 0.01 level.



4.1.2 Comparative Analysis of CG and EG : Subscales of Aggression

This section tried to make comparative analysis of CG and EG groups on the various aggression subscales. The results have been put forward in the various tables of the forth coming sections.

Assault Subscale

The table below shows the mean and SD score of CG and EG on assault subscale of BDI. The maximum score which could be obtained on this scale was 10.

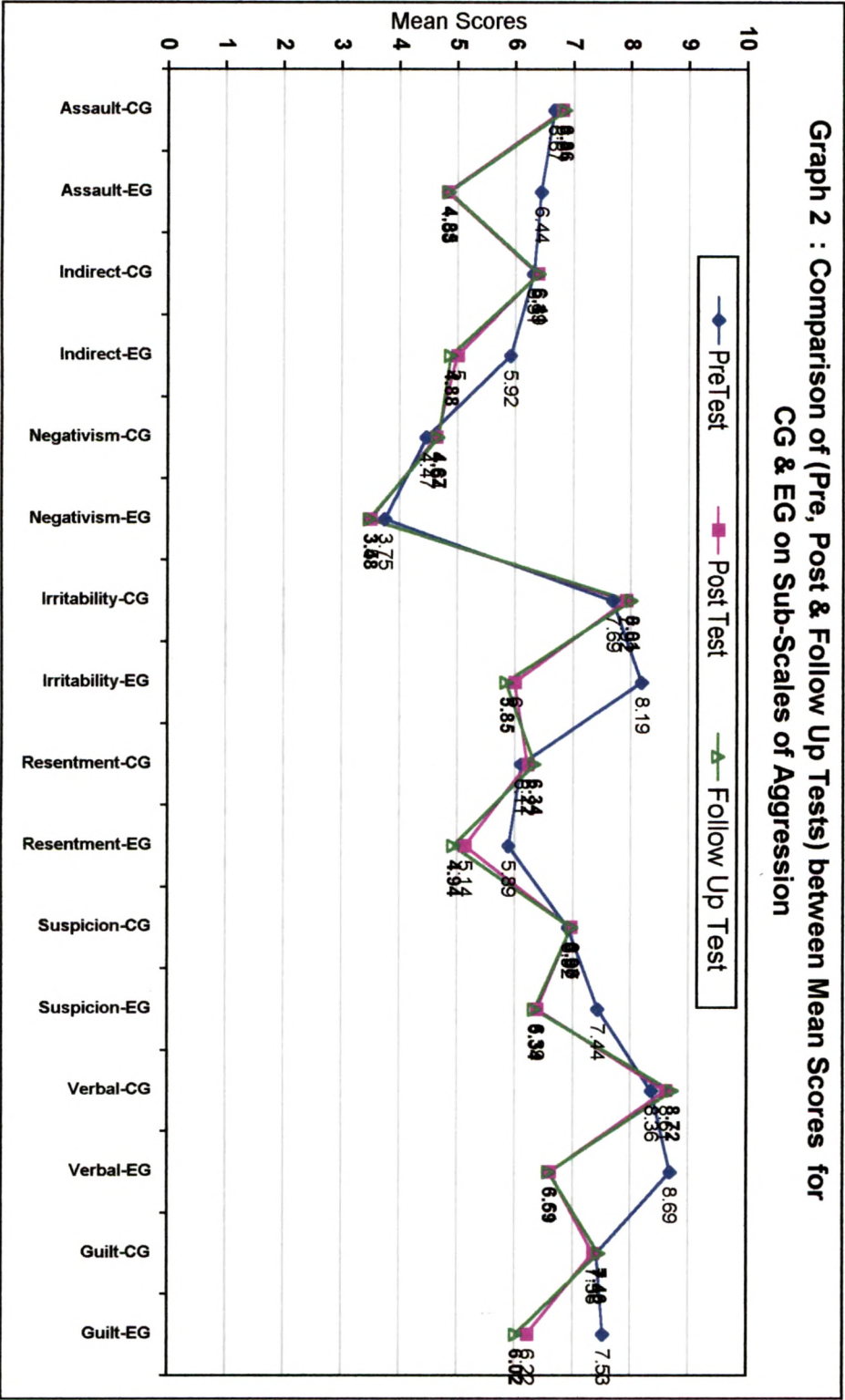
Table 11 : Pre and post test comparisons of CG and EG on aggression subscale

ASSAULT

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	6.44	1.32	4.83	1.13	4.85	0.97
CG	6.67	1.60	6.81	1.55	6.86	1.50

For the EG the pre-test mean was 6.44 (S.D : 1.32). The post test mean calculated was 4.83 (S.D : 1.13). Follow up revealed a decline in the mean scores to 4.85 (S.D : 0.97) for the groups. On the pre-test for CG the average scores was 6.67 (S.D : 1.60). On the post test mean was found as 6.81 (S.D : 1.55). The follow up showed an upward trend in mean scores rising to 6.86 (S.D : 1.50). Thus for EG a fall in mean scores was observed from pre to post tests. However in the case of CG a negligible increase in mean scores was evident at post tests as can be seen from Graph – 2.

The t-test conducted to observed whether any difference had reached for the groups exposed to therapy, and those which weren't revealed for a calculated



value of $t = 6.17$ ($df = 35$). The value was found significant at 0.01 level of significance.

Indirect Subscale

The second subscale of the BDI was the scale of Indirect Aggression. The maximum score which could be obtained on this subscale was 09. The comparative results of EG and CG have been shown in Table 12.

Table 12 : Mean and SD scores of CG and EG on Indirect Subscale at pre-post and follow up.

INDIRECT

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	5.92	1.44	5.00	1.29	4.88	1.27
CG	6.31	1.37	6.39	1.38	6.41	1.40

At pre-test when comparisons were made between the CG – EG means, difference was observed in means 6.31 (S.D : 1.37) and 5.92 (S.D : 1.44) respectively. On post test CG mean negligibly increased to 6.39 (S.D : 1.38). While the EG showed a slight decline in mean score to 5.00 (S.D : 1.29). On follow-up mean value of CG increased to 6.41 (S.D : 1.40). The EG mean value observed at follow-up was noticed as 4.88 (S.D : 1.27). The ‘t’ test observed a calculated value of 4.41 ($df = 35$) as the difference between CG and EG. This calculated value was significant at 0.01 level.

Negativism Subscale

The third subscale in the series on BDI is ‘Negativism’. An individual can obtain a maximum score of 05 on the scale. The table below has made the important comparisons between CG and EG, at pre post and follow-up stages on their mean and S.D.’s.

Table 13 : Mean and SD scores of CG and EG on Negativism Subscale at pre-post and follow up.

NEGATIVISM

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	3.75	1.13	3.50	0.94	3.48	0.89
CG	4.47	1.28	4.48	1.28	4.67	1.19

The pre test comparison between CG and EG show the following means : CG 4.47 (S.D : 1.28). While EG had lesser mean to start with before intervention : 3.75 (S.D : 1.13). When post tests were conducted for CG, the mean remained almost stable to 4.48 (S.D : 1.28). While in case of EG its slightly decreased to 3.50 (S.D : 0.94). Comparisons on follow-up showed mean value of CG as 4.67 (S.D : 1.19), almost stable after post test. While in case of EG mean of 3.48 (S.D : 0.89) was observed. The ‘t’ test calculated a value of 4.54, (df = 35). The value suggested a significant difference between control and experimental groups at 0.01 level.

Irritability Subscale

In this subscale, the maximum possible scores can be 11. Table 14 gives the data of aggressive group of CG and EG for this subscale.

Table 14 : Mean and SD scores of CG and EG on Irritability Subscale at pre-post and follow up.

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	8.19	1.17	5.85	1.19	6.00	1.24
CG	7.69	1.12	8.01	1.15	7.92	1.13

Comparison of means on this subscale shows that pre test mean scores of CG and EG had some variation; 7.69 (S.D : 1.12) and 8.19 (S.D : 1.17) respectively. In post test, the mean value of CG enhanced minutely to 7.92 (S.D : 1.13). For experimental group it decreased drastically to 6.00 (S.D : 1.24). The effect of therapy seems to have sustained in case of EG, displaying a mean scores of 5.85 (S.D : 1.19) at follow-up. The CG scores however increased to a mean value of 8.01 (S.D : 1.15). The ‘t’ calculated was 6.85, which was against significant at 0.01 level.

Resentment Subscale

The next subscale, in the inventory was measuring resentment maximum possible score which could be obtained here was 08. A comparison on mean and S.D. of CG and EG at pre-post and follow-up stages has been made in Table 15.

Table 15 : Mean and SD scores of CG and EG on Resentment Subscale at pre-post and follow up.

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	5.89	1.06	4.94	1.20	5.14	1.02
CG	6.11	0.92	6.34	0.95	6.22	0.93

Comparing the pre test means, it was seen that CG displayed a mean value of 6.11 (S.D : 0.92). While EG’s average score was found to be 5.89 (S.D : 1.06). In CG post tests, an almost unobservable increase was evident with mean value of 6.22 (S.D : 0.93). The EG showed a trend of small decline in its average score to 5.14 (S.D : 1.02). The effect of therapeutic interventions becomes clearly visible here. At follow-up this trend was maintained within average value of 4.94 (S.D : 1.20) for EG. The CG further rose in the follow-ups to 6.34

(S.D : 0.95). The ‘t’ calculated was 4.71 (df = 35), which was significant at 0.01 significance level.

Suspicion Subscale

The sixth scale on BDI is the subscale of Suspicion. Maximum possible score on this subscale is 11. Table 16 displays the relevant results used for comparison purposes on this scale.

Table 16 : Mean and SD scores of CG and EG on Suspicion Subscale at pre-post and follow up.

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	7.44	1.56	6.34	1.65	6.39	1.64
CG	6.92	1.32	6.98	1.29	6.97	1.28

For CG pretest mean score observed was 6.92 (S.D : 1.32). The post test mean value was seen more or less, relatively stable : 6.97 (S.D : 1.28). In case of EG pre test average score was 7.44 (S.D : 1.56). In post tests, mean of 6.39 (S.D : 1.64) was displayed showing a downward trend (as can also be seen from Graph).

The follow up revealed a slight decrease in scores for EG with an obtained mean scores of 6.34 (S.D : 1.65). This implies, the therapeutic intervention (in terms was effective even when the group was not being worked upon. On the other hand control group results disclosed an average score, almost stable after post tests and retained during follow-ups as 6.98 (S.D. 1.29). The t-test calculated here gave a value of 1.68 (df = 35) at post test. The value was insignificant at 0.01 level.

Verbal Subscale

Verbal subscale is the seventh subscale in BDI. An individual can score maximum upto 13 here. The relevant results have been presented in table 17.

Table 17 : Mean and SD scores of CG and EG on Verbal Subscale at pre-post and follow up.

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	8.69	1.39	6.61	1.13	6.59	1.16
CG	8.36	1.33	8.61	1.23	8.72	1.16

As is evident from the table, the pre test of CG and EG, do not display much of a difference in their means scores 8.36 (S.D :1.33) and 8.61 (S.D : 1.23) respectively. However, when post tests were carefully noted a minute upward gradation was seen in the mean scores of CG : 8.61 (S.D : 1.23). On the contrary, conspicuous fall in the mean scores for EG : 6.61 (S.D : 1.13) was observed. The graph clearly reveals this difference further at follow up, where the mean scores for CG rose to 8.72 (S.D : 1.16). In case of EG these scores remained almost stable to 6.59 (S.D : 1.02). The t calculated for verbal subscale was 7.20 (df = 35). This value was marked as highly significant at 0.01 level. The post test mean comparisons between CG and EG made this picture emerge more clearly.

Guilt Subscale

The last subscale of the aggression inventory was the subscale of ‘Guilt’. The maximum possible obtained score here could be 08. The Table 18 shows important results considered for comparison purposes.

Table 18 : Mean and SD scores of CG and EG on Guilt Subscale at pre-post and follow up.

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	7.53	1.23	6.22	1.48	6.02	1.01
CG	7.42	1.20	7.36	1.22	7.46	1.16

In the area of Guilt it was noted, that though the pre test mean scores of CG and EG; mean 7.42 (S.D : 1.20) and 7.53 (S.D : 1.23) respectively, didn't differ much but the post test scores showed an almost similar pattern. This condition can also be seen from the graph. It was noted that average score of EG and CG dropped to 7.36 (S.D : 1.22) and 6.22 (S.D : 1.48) respectively. This trend seemed a bit strange, since it was difficult to recognize how CG without interventions, displayed this decrease in scores. While the EG results here prove the remarkable effect of the varied therapies applied, which so ever. These results were retained at follow up for the EG. Thus displaying a mean score of 6.02 (S.D : 1.01). On the other hand CG showed, rise in mean scores to 7.46 (S.D : 1.16) at the follow up stage. The t-test revealed a difference between the control and experimental groups on this component. The value obtained was 3.56 which was significant at 0.01 level.

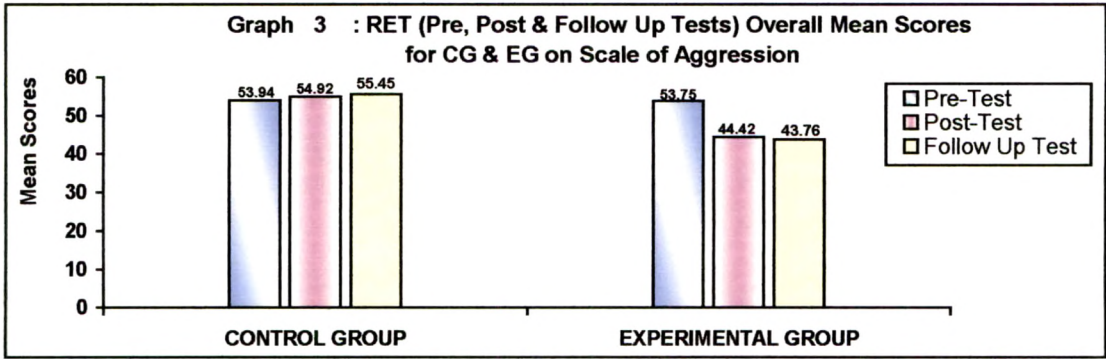
4.2. RET: PRE POST AND FOLLOW UP RESULTS ON AGGRESSION (Overall scale)

The analysis here incorporated an extensive study on finding the impact of RET on mean scores of participants at pre -post and follow up stages (overall scores on BDI). These comparisons have been made in the table :

Table 19 : RET : Pre –post and follow up – overall BDI scores

	Pre test		Post test		Follow up	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
EG	53.75	2.38	44.42	3.96	43.76	3.92
CG	53.94	3.05	54.92	2.79	55.45	2.71

As per the table – the pre-test aggression score of EG indicated a mean value of 53.75 (S.D : 2.38). The CG displayed a very close result to EG : with the mean value of 53.91 (S.D : 3.05). However the post tests brought forth a remarkable difference in these scores as revealed more clearly from Graph 3.



The CG shows slight increase in its pre-post test scores. While EG (after REBT application) conspicuously displays a change. The ‘t’ test results indicated a significant value of 15.69, df = 11 at 0.01 level.

4.2.1 REBT: Pre Post and Follow Up Results for Aggression Subscales

The research here scrutinized the impact on the varied aggression subscales through application of REBT. The pre-post and follow up results of EG and CG have been discussed in the Table 20.

Table 20 : RET : Pre-Post and follow up results for EG-CG on BDI subscales.

		CONTROL GROUP		EXPERIMENTAL GROUP	
Subscales	Tests	Mean	S.D.	Mean	S.D.
Assault	Pretest	6.67	1.60	6.75	0.97
	Post test	6.81	1.55	5.67	1.07
	Follow up	6.86	1.50	5.85	1.12
Indirect	Pretest	6.31	1.37	5.33	1.15
	Post test	6.39	1.38	4.58	0.90
	Follow up	6.41	1.40	4.51	0.95
Negativism	Pretest	4.47	1.28	4.33	0.98
	Post test	4.64	1.17	4.08	0.79
	Follow up	4.67	1.19	4.07	0.83
Irritability	Pretest	7.69	1.12	7.92	1.24
	Post test	7.92	1.13	6.33	1.23
	Follow up	8.01	1.15	6.11	1.19
Resentment	Pretest	6.11	0.92	5.33	0.89
	Post test	6.22	0.93	4.67	1.07
	Follow up	6.34	0.95	4.41	1.21
Suspicion	Pretest	6.92	1.32	7.08	1.51
	Post test	6.97	1.28	5.83	1.64
	Follow up	6.98	1.29	5.77	1.63
Verbal	Pretest	8.36	1.33	9.50	1.00
	Post test	8.61	1.23	7.08	1.00
	Follow up	8.72	1.16	7.21	1.15
Guilt	Pretest	7.42	1.20	7.50	1.45
	Post test	7.36	1.22	6.17	1.03
	Follow up	7.46	1.16	5.83	1.09

As results disclosed the subscales of ‘Assault’ in the pre-test scores revealed a mean value of 6.75 (S.D : 0.97). The post tests results for the same showed a significant decrease to 5.67 (S.D : 1.07). Contrasting these results with CG, a slight increment in the mean scores was observed from 6.67 (S.D : 1.60) to 6.81 (S.D : 1.55). Follow up with the groups on the subscale showed CG mean as 6.86 (S.D : 5.50) and EG mean as 5.85 (S.D : 1.12). This subscale calculated

a t value of 3.67 (df = 11) from pre to post tests for EG the obtained value was significant at 0.01 level.

The component of 'Indirect Aggression' indicated an average score of 5.50 (S.D : 1.68) in its pre-test results. At post tests, a little decline in the scores 5.17 (S.D : 1.48) was observed. The follow ups revealed a mean scores of 4.51 (S.D : 0.95) for EG and 6.41 (S.D. 1.40) for CG. The CG on evaluation produced a mean of 6.31 (S.D.: 1.38) in the pre test results. While in the post test a small degree of increase was observed for mean scores, calculated as 6.39 (S.D. : 1.38). The indirect subscale produced at t value of 3.44 (df = 11). The scores show the effect of therapy at 0.01 significance level.

The 'Negativism' subscale exposed a pre test mean value of 4.33 (S.D : 0.98). On its counter part post tests showed an average of 4.03 (S.D. : 0.45). The follow ups for EG displayed a mean score of 4.07 (S.D. : 0.83). While CG here disclosed this value as 4.67 (S.D. : 1.19). The same scale for CG observed a mean score of 4.47 (S.D. : 1.28) in pre test. Post tests mean score calculated this value as 4.64 (S. D. : 1.17), revealing a minute increase in scores. The follow ups showed an increment to 4.67 (S.D. : 1.19) for the same. The subscale of negativism gave a value of $t=1.91$ (dt = 11). The results are seen as non-significant at 0.01 level. Thus revealing no impact of therapy in this area.

The component of Irritability recognized mean scores as 7.93 (S.D : 1.24) in pre test. This decreased to 6.33 (S.D : 1.23) at post tests for EG. The therapeutic effect lasted for EG, showing further decline in mean value to 6.11 (S.D : 1.19). Parallely CG displayed a mean value of 7.69 (S.D.: 1.12) at the initiation of the intervention. After termination results noted a mean score of 7.92 (S.D. : 1.13). Follow up showed degradation in scores to 7.81 (S.D : 1.51) without interventions. The subscale proved for an effective impact of therapy on aggressive behaviour here. The noted $t = 6.92$ (df = 11) was highly significant at 0.01 level of significance.

Comparing the score on the component of Resentment (before and after intervention); a mean value of 5.33 (S.D. : 0.89) was observed in pre test. The score at post tests showed a downward trend with an obtained mean score of 4.67 (S.D. : 1.07). However the CG population showed the average as 6.11 (S.D. : 0.92) at pre test. This value increased at post test to 6.22 (S.D. 0.93). Though the mean scores for EG declined at follow ups, the CG follow up mean scores further increased to 6.34 (S.D. : 0.94). Resentment component computing a $t = 2.15$ ($df = 11$) was not significant at 0.05 level.

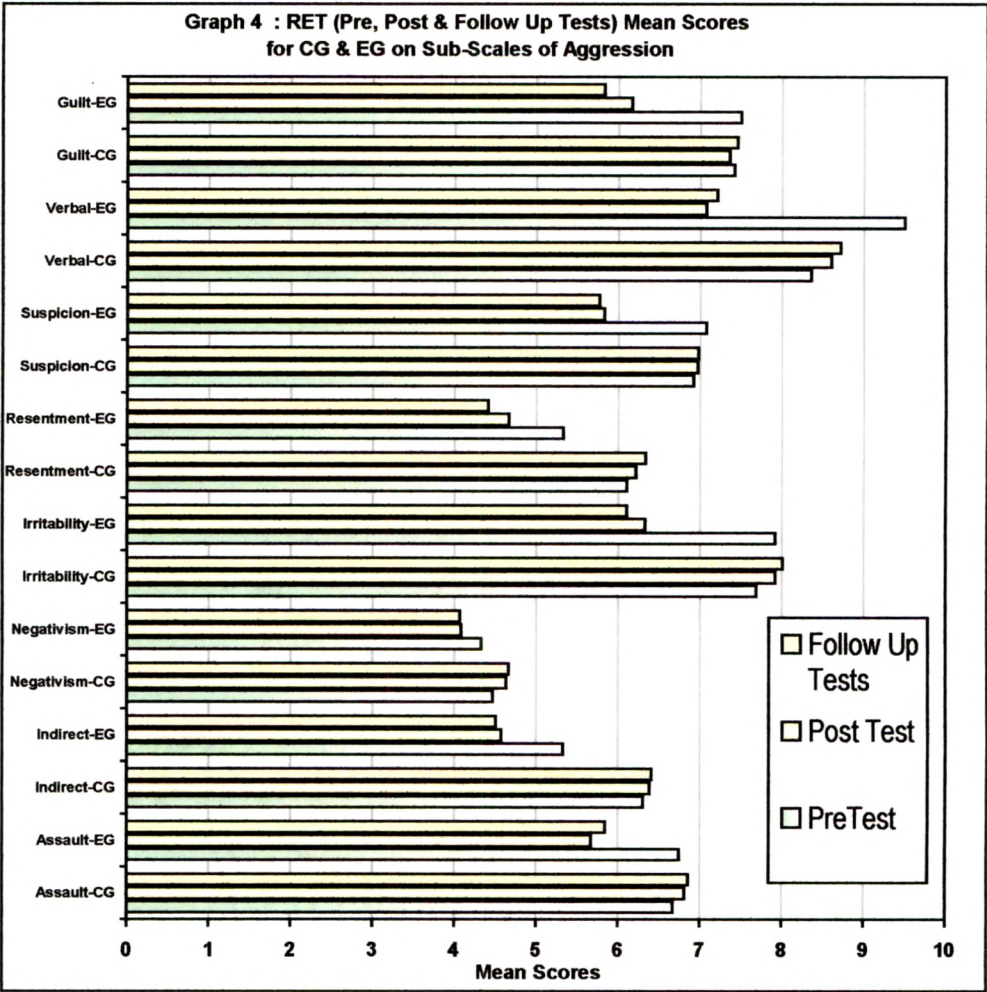
The results determined for Suspicion reflect pre test mean as 7.08 (S.D. : 1.51). In contrast post tests results show the mean scores declining to 5.83 (S. D. : 1.64). The trend in follow up was carefully observed. The CG scores resisted to a negligible with a mean value of 6.98 (S.D. : 1.29). The EG however retained the intervention effect reflecting a mean score of 5.77 (S.D. : 1.63). The subscale on suspicion resulted for a t value of 3.80 ($df = 11$) proving for significant impact of therapy at 0.01 level on the component in this area.

The subscale on Verbal aggression, brought forth a mean score of 9.50 (S.D. : 1.00) at pre test. A reduction in this score to 7.08 (S.D. 1.00) was seen. Considering the score of CG, it was noted, that pretest showed a mean score of 8.36 (S.D. : 1.33) increasing to 8.61 (S.D. : 1.23) at post tests. Looking in to the follow ups, the find the mean score of CG as 8.72 (S.D. :1.16). This score indicates an increase in aggressive behaviour without interventions. While for the EG the mean scores rose up to 7.21 (S.D. : 1.05). This subscale gave a t calculated of 7.19 ($df = 11$). This value was highly significant at 0.01 level indicating REBT impact as extremely effective on the verbal subscale.

Observing the pre test score on Guilt a mean value of 7.50 (S.D : 1.45) was indicated. During post tests, this value declined to 6.17 (S.D : 1.03). Further follow up showed more of decline to an average score of 5.83 (S.D : 1.09). The CG on the subscale of 'Guilt' manifested mean score as 7.42 (S.D :1.20), before intervention. After intervention, results showed, the mean as 7.36 (S. D

: 1.22). The follow up score for CG were observed to be 7.46 (S.D 1.16). In case of guilt a significant difference was observed from pre to post tests. The t observed was 4.30 (df = 11) significant at 0.01 level.

The comparison of CG and EG on RET can be more clearly identified from the Graph4 :



The Graph clearly indicates, the maximum decrease in the mean value of ‘verbal aggression’ from pre to post tests. While a minute decline is evident on the subscale of ‘Negativism’ on comparison of pre and post test results. Contrary to this, CG results display a rise in verbal aggression scores at post tests. Slight decline in mean score is seen for the guilt subscale.

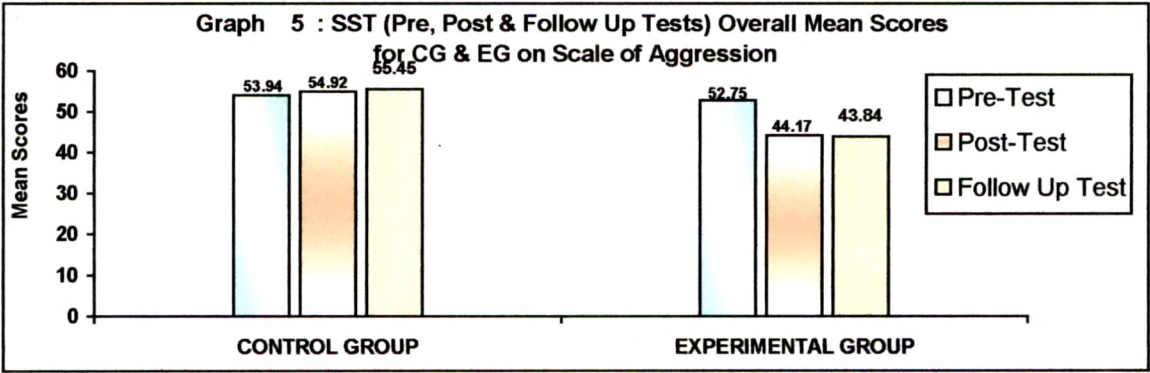
The t-test measuring the effectiveness of RET on the various subscales indicates its significant impact on most of the subscales, leaving the areas of negativism and resentment.

4.3 RESULTS OF SST : BDI OVERALL SCALE

The results in this section tried to determine the effectiveness of SST on aggression from the pre to the post stage and later during follow ups. The findings have been put forward in the Table.

Tests	CONTROL GROUP		EXPERIMENTAL GROUP	
	Mean	S.D.	Mean	S.D.
Pretest	53.94	3.05	52.75	2.80
Post test	54.92	2.79	44.17	2.79
Follow up	55.45	2.71	43.76	3.92

The Pre-test SST results showed a mean score of 52.75 (SD : 2.80) for E.G. These scores declined to 44.17 (S.D.:2.79) at Post tests. The follow ups showed sustenance of therapeutic impact with a mean score of 43.76 (S.D.:3.92) Closely the CG on observation manifested an average value of 53.94 (S.D.: 2.79) at pretests. After intervention observations unlike for EG, showed further rise in mean scores to 54.92 (S.D.:2.79). Follow ups done, measured gain in scores to 55.45 (S.D.:2.71). The pre-post test comparison become vivid from graph 5.



Finally 't' test measuring the effectiveness of therapy, from pre to post stage calculated a value of $t=13.82$, ($df = 11$). The calculated value was significant at 0.01 level. The results thus pinpoint towards the effectiveness of SST package on the overall aggressive behaviour of individuals.

4.3.1 Results Of SST : BDI Subscales

The research study further analysed, the impact of Social Skills Training Programme on the subscales of aggression. Some of the obtained significant values of the test, have been discussed in the table below :

Table 22 : SST : Pre-Post and follow up results for EG-CG on BDI subscales.

Subscales	Tests	CONTROL GROUP		EXPERIMENTAL GROUP	
		Mean	S.D.	Mean	S.D.
Assault	Pretest	6.67	1.60	6.17	1.64
	Post test	6.81	1.55	4.08	0.90
	Follow up	6.86	1.50	4.09	0.94
Indirect	Pretest	6.31	1.37	5.50	1.68
	Post test	6.39	1.38	5.17	1.47
	Follow up	6.41	1.40	5.03	1.41
Negativism	Pretest	4.47	1.28	3.58	1.38
	Post test	4.64	1.17	3.17	1.03
	Follow up	4.67	1.19	3.12	1.07
Irritability	Pretest	7.69	1.12	8.25	1.14
	Post test	7.92	1.13	6.00	1.48
	Follow up	8.01	1.15	6.08	1.46
Resentment	Pretest	6.11	0.92	5.75	1.14
	Post test	6.22	0.93	5.33	0.89
	Follow up	6.34	0.95	5.21	0.85
Suspicion	Pretest	6.92	1.32	7.42	1.62
	Post test	6.97	1.28	6.33	1.83
	Follow up	6.98	1.29	6.17	1.91
Verbal	Pretest	8.36	1.33	8.25	1.42
	Post test	8.61	1.23	6.50	0.67
	Follow up	8.72	1.16	6.61	0.81
Guilt	Pretest	7.42	1.20	7.83	0.90
	Post test	7.36	1.22	7.58	2.80
	Follow up	7.46	1.16	7.53	0.88

Table makes it evident that 'Assault' subscale displayed mean score of 6.17 (S.D. : 1.64) before SST application. However, a mean value of 4.08 (S.D.:0.90) was observed at post-tests. The follow up mean scores show no substantial gain or fall in these score, 4.09 (S.D.:0.94). While a closer look at CG results disclosed an average score of 6.67 (S.D.:1.60) at pretests. Post tests displayed slight gain to 6.81 (S.D.:1.55). The follow ups further showed some increase in this score to 6.86 (S.D.:1.50).

The t - calculated for 'assault' gave a value of 5.50 (df = 11) at 0.01 level of significance. The results prove the impact of SST training on the individuals on this subscale.

The component of 'Indirect aggression' exposed a mean score of 5.50 (S.D.:1.68) in pretests for the experimental group. A slight decline in the mean scores was observed at post-test 5.17(S.D.:0.42). Follow ups recognised a fall in the scores to 5.03 (S.D.:1.41) while CG at its pretests bore a mean score of 6.31 (S.D.:1.37). At post tests the mean observed was 6.39 (S.D.:1.38). Follow ups showed further increase in the average value to 6.41 (S.D.:1.40). The t – calculated for indirect aggression was 2.34 (df = 11). This value was significant at 0.05 level but not at 0.01 level. The results prove the impact of intervention for the component. Results become conspicuous from graph 6.

The area of 'Negativism' determined a mean value of 3.58 (S.D : 1.38) in pretests. Post tests didn't prove a strong impact of therapy, with an obtained mean value of 3.17 (S.D : 1.07). The follow ups retained the therapeutic impact, with an average score of 3.12 (S.D : 1.07). The CG pretest results on the component were much higher than for EG, disclosing a value of 4.47 (S.D: 1.28). On termination, the scores got slightly increased to 4.64 (S.D : 1.17). However follow up, didn't show either sustenance or decrease in results, with the average scores as 4.67 (S.D : 1.19). The 'negativism' component gave a t = 2.15 (df = 11). The produced value pointed towards insignificant results at 0.05 level of consideration. Thus, therapy has been unable to touch this component.

'Irritability' subscale revealed, mean score of 8.25 (S.D : 1.14) before intervention. Average score of 6.00 (S.D : 1.48) was observed at post – tests. The withdrawal of therapy, remarked the recurrence of the behavior, with a displayed average scores of 6.08 (S.D : 1.46). This subscale gave a significant value of $t = 5.48$ ($df = 11$) at 0.01 level of significance. They therapy here has effectively intervene with the individuals.

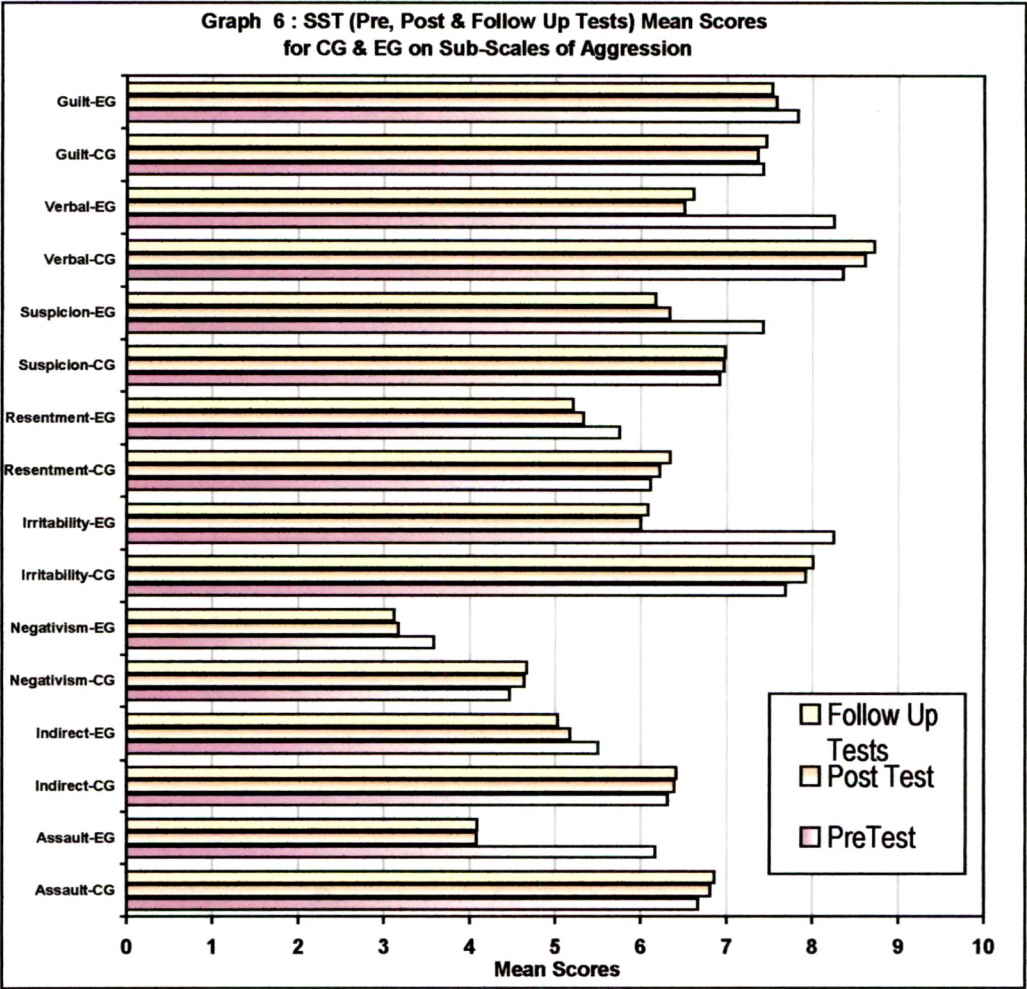
While evaluating 'resentment' a mean value of 5.75 (S.D. : 1.14) was calculated at pretests. The post test scores, showed mean score of 5.33 (S.D : 0.89). Follow up, proved the effect of SST on this sub-scale, with the mean, scores lowering to 5.21 (S.D:0.85). The CG resentment sub-scale however manifested, mean score of 6.11 (S.D : 0.92). This value altered at post tests to 6.22 (S.D : 0.93). The subscale on resentment calculated a $t = 1.10$ ($df = 11$). This value was insignificant at 0.01 level. Therapeutic intervention resulted for no impact in this area.

'Suspicion' sub-scale brought in sight, mean score of 7.42 (S.D : 1.62) at pretest. The scores at post test were calculated as 6.33 (S.D : 1.83). The impact of SST on the sub-scale was seen at follow ups, with mean score 6.17 (S.D : 1.91). Considering the CG scores here, a mean value of 6.92 (S.D : 1.32) was seen at pretests – A slight increment to 6.97 (S.D:1.28) was observed at post tests. Follow ups showed almost stable results, 6.98 (S.D:1.29). The suspicion subscale calculated $t = 3.76$ ($df = 11$). The value calculated was significant at 0.01 level. The results indicate the suspicion can be reduced by SST interventions.

Pre-test scores in the area of 'Verbal aggression' reflected a mean value of 8.25 (S.D:1.42). The post-test results showed decline in mean value to 6.50 (S.D:0.67). The follow ups revealed a difficulty in sustaineance of training, with mean score of 6.61 (S.D:0.81). The CG on the other hand disclosed mean scores of 8.36 (S.D:1.33) at pre-tests. The post tests examined an increase in the scores to 8.61 (S.D:1.33). Follow ups indicated, gain in the average scores

of the group; 8.72 (S.D : 1.16) in the time lapse. The verbal subscale observed a $t = 4.70$ (df = 11) which was significant at 0.01 level. The result show a significant impact of training in reducing verbal aggression.

‘Guilt’ sub-scale for CG expressed mean score of 7.42 (S.D:1.20) on pre-tests. Post test scores declined to 7.36 (S.D:1.22). Follow ups showed rise in scores to 7.46 (S.D: 1.16). The guilt subscale measured its ‘t’ as 1.39 (df = 11).The results were non-significant at 0.05 and 0.01 levels of significance. The intervention did not have significant impact on the area.



The Graph above depicts sharpest decline in mean scores on ‘Irritability’ sub-scale of EG. Least impact is seen for the ‘Guilt’ sub-scale

The ‘ t – tests’ done for evaluating, impact of SST on various subscales, showed an insignificant therapeutic effect in the areas of ‘Negativism’, ‘Resentment’ and ‘Guilt’. Rest of the areas, bring forth significant ‘calculated’ value, assuring the effect of training on these components.

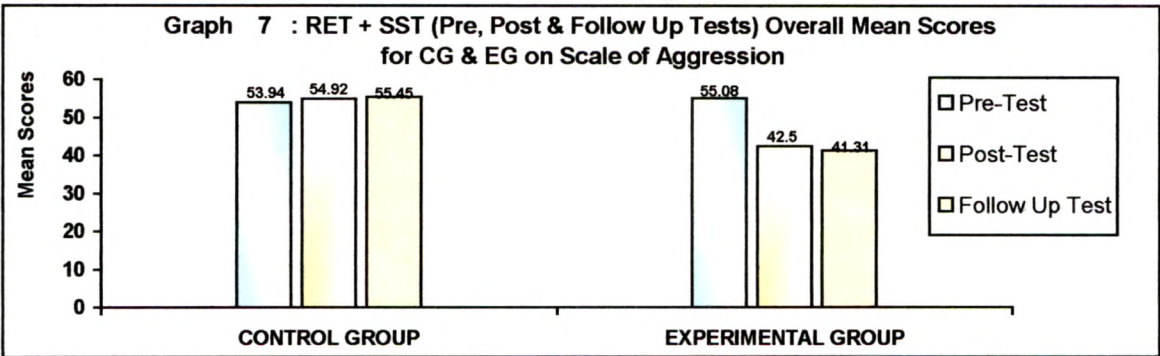
4.4 RESULTS OF COMBINED TREATMENT : BDI OVERALL

The evaluations probed into finding, the combined impact of RET and SST on the overall aggression scores. The results show the following trend as viewed from Table 23.

Table 23 : Combined Package : Pre-Post and follow up results for CG – EG on BDI (Overall scores).

Tests	CONTROL GROUP		EXPERIMENTAL GROUP	
	Mean	S.D.	Mean	S.D.
Pretest	53.94	3.05	55.08	2.84
Post test	54.92	2.79	42.50	1.93
Follow up	55.45	2.71	41.31	1.86

The pretest overall aggression scores of the combined package, calculated a mean value of 55.08 (S.D : 2.84). Post – tests on the other hand showed drop in mean scores to 42.50 (S.D : 1.93). The control group, on the contrary revealed mean of 53.94 (S.D : 3.05) at pretests. However, untouched by therapy, their scores increased to 54.92 (S.D : 2.71). The follow ups revealed a similar trend,



with an average score of 55.45 (S.D : 2.71). The combined treatment proves for a highly significant impact in reducing aggressive behaviour with an obtained $t = 22.60$ ($df = 11$) at 0.01 level of significance. Graph – 7 explicitly displays, the intervention impact on the overall scores.

4.4.1 Results of Combined Package : BDI Sub-scales

The impact of REBT and SST in combination has been accounted in this section on its effect on various sub-scale. The results have been shown in Table 24.

Table 24 : Combined Package : Pre-Post and follow up results CG and EG on aggression subscales.

Subscales	Tests	CONTROL GROUP		EXPERIMENTAL GROUP	
		Mean	S.D.	Mean	S.D.
Assault	Pretest	6.67	1.60	6.42	1.31
	Post test	6.81	1.55	4.75	0.87
	Follow up	6.86	1.50	4.63	0.86
Indirect	Pretest	6.31	1.37	6.92	0.90
	Post test	6.39	1.38	5.25	1.42
	Follow up	6.41	1.40	5.10	1.44
Negativism	Pretest	4.47	1.28	3.33	0.78
	Post test	4.64	1.17	3.25	0.75
	Follow up	4.67	1.19	3.26	0.75
Irritability	Pretest	7.69	1.12	8.42	1.16
	Post test	7.92	1.13	5.67	0.98
	Follow up	8.01	1.15	5.36	0.91
Resentment	Pretest	6.11	0.92	6.58	0.79
	Post test	6.22	0.93	5.42	1.00
	Follow up	6.34	0.95	5.21	1.12
Suspicion	Pretest	6.92	1.32	7.83	1.59
	Post test	6.97	1.28	7.00	1.35
	Follow up	6.98	1.29	7.08	1.41
Verbal	Pretest	8.36	1.33	8.33	1.44
	Post test	8.61	1.23	6.25	1.48
	Follow up	8.72	1.16	5.27	1.52
Guilt	Pretest	7.42	1.20	7.25	1.22
	Post test	7.36	1.22	4.92	1.08
	Follow up	7.46	1.16	4.70	1.02

The EG assault subscale showed a mean value of 6.42 (S.D : 1.31) at pretests. Post test value decreased to 4.75 (S.D : 0.87). The follow up scores showed, retention of intervention package, with an obtained mean of 4.63 (S.D : 0.86). The t – test conducted to measure the effectiveness of the package on this area gave a value of 4.02 (df = 11) which was significant at 0.01 level . The results show significant impact of interventions on the subscale.

For CG, mean and S.D. computed at pretests were 6.67 (S.D : 1.60). The average scores increased at post tests to 6.81 (S.D : 1.55). Follow ups showed further rise in scores to 6.86 (S.D : 1.50).

‘Indirect aggression’ pretest mean was 6.92 (S.D : 90) dropping to 5.25 (S.D : 1.42) at post test. The mean score decreased at follow ups, 5.10 (S.D : 1.44) revealing therapeutic impact, after a gap period. For CG, mean 6.31 (S.D : 1.37) was observed at pretests. Increase in scores is seen at post tests with mean score of 6.39. This area produced the ‘t’ value of 4.43 (df = 11) contributing for significant therapeutic impact on this area at 0.01 level of significance.

The average follow up score increased to 6.41 (S.D: 1.40). Viewing the ‘Negativism’ subscale a mean of 4.47 (S.D:1.28) was observed at pretests for the CG. The scores rose to 4.64 (S.D:1.17) at post test. At follow ups, a mean score of 4.67 (S.D : 1.19) was observed. The EG scores indicated, an average value of 3.33 (S.D:0.78) at pre-test. The value slightly increased to 3.25 (S.D: 1.55) at post tests. Follow up scores showed negligible change with mean of 3.26 (S.D: 0.75). The ‘t’ tests gave a value of 1.00 (df = 11). Results were not significant at 0.01 level. It can be interpreted that the therapeutic intervention was ineffective in bringing any change on the subscale.

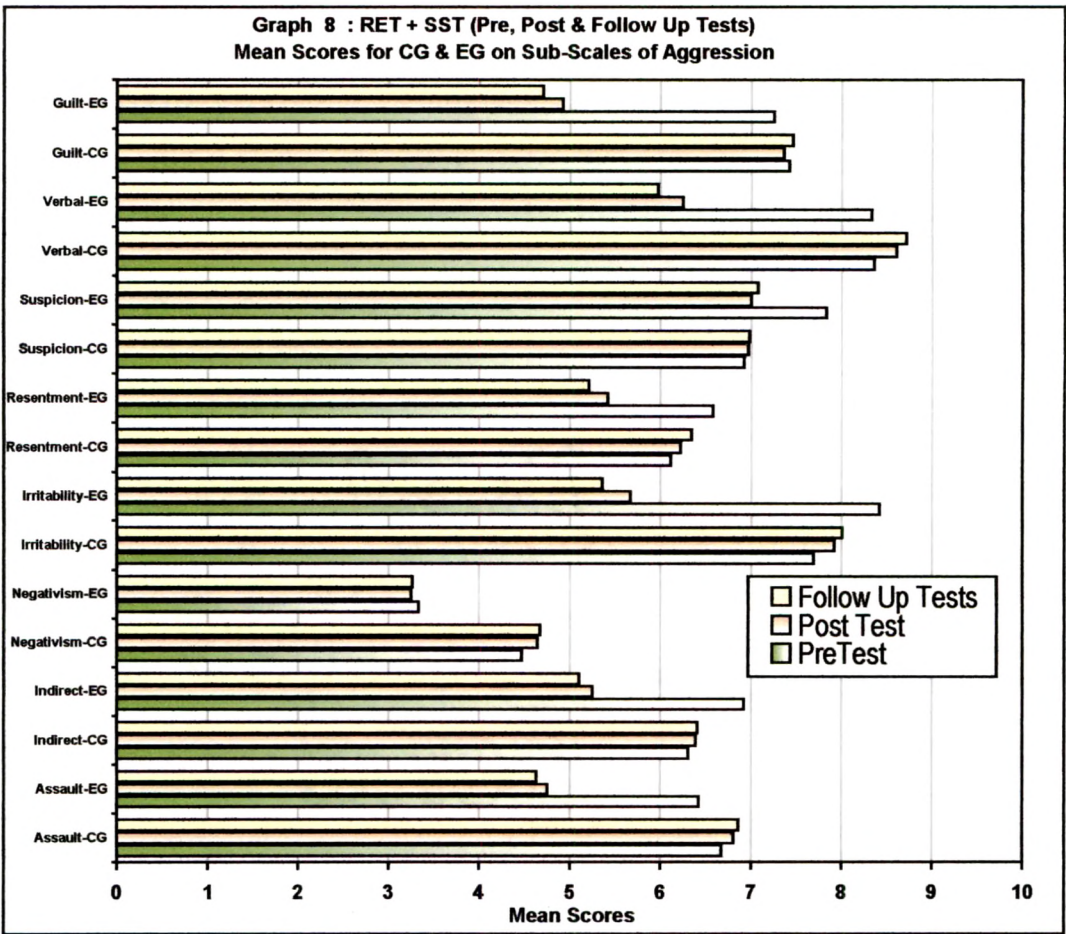
Looking into the area of ‘Irritability’, mean score of 8.42 (S.D:1.16) was noted for EG at Pre-tests. The average scores looked high. However, intervention done in this area enabled in reducing average scores tremendously to 5.67 (S.D.0.98). Follow up proved the effects, with mean score of 5.36 (S.D.0.91). For CG, pretest mean of 7.69(S.D:1.12) slightly increased to 7.92 (1.13). The

follow ups showed, the value as 8.01 (S.D:1.15). The irritability component gave a highly significant ‘t’ value of 7.02 (df = 11). The value was found significant at 0.01 level. It could be interpreted that the combined package was highly effective in reducing irritability of the aggressive adolescence.

‘Resentment’ area expressed, mean score of 6.58 (S.D:0.79) in pretest. This value declined to 5.42 (S.D:1.00) at post-test. The follow up sustained therapeutic impact, with average value displayed as 5.21 (S.D:1.12).

In case of CG, resentment mean scores of 6.11 (S.D:0.92) at pretest rose to 6.22 (S.D:0.93). The follow ups, showed these scores as 6.34 (0.95). The effectiveness of the package on the subscales becomes visible on the graphs with variation in the pre-post mean scores visible on the graph.

The ‘Suspicion’ subscale, displayed mean score of 7.83 (S.D:1.59) at pretest



for EG. These scores changed minutely to 7.00 (S.D:1.35) at post tests.

However at follow-up, the therapeutic effect was not retained, with mean score rising to 7.08 (S.D:1.41). The CG, had average scores of 6.92 at pretest. A negligible gain to 6.97 (S.D:1.28) was seen at post tests. Follow ups didn't show improvements with a mean score of 6.98 (S.D:1.29). The suspicion subscale resulted for a t value of 3.45 ($df = 11$) which was significant at 0.01 level. The combined package could enable in reducing suspiciousness of the target group members.

In the 'verbal' aggression, area for EG sharp decline was seen in the mean values from pre to post tests with means 8.33 (S.D: 1.44) to 6.25(S.D:1.48). The intervention was effective and lasting even at follow up stage, with mean score of 8.72 (1.16).

For CG the mean score of 8.36 (S.D:1.33) rose to 8.61(S.D:1.23) from pre to post tests respectively. Follow ups showed increase of the scores to 8.72(S.D:1.16). This components disclose its calculated $t = 5.23$ ($df = 11$). The result was significant at 0.01 level. Verbal aggression was hence forth effectively handle by the combined package.

Lastly, the 'guilt' subscale for EG, showed decline in the mean scores, before and after intervention sessions. The value was found as 7.25 (S.D:1.22) reducing to 4.92 (S.D:1.08). The CG showed a similar trend with average scores of 7.42 (S.D:1.20) declining to 7.36 (S.D:1.22) at post tests, without intervention. The follow up scores again rose to 7.46 (S.D:1.16). The guilt subscale gave $t = 5.89$ ($df = 11$) which was a significant result.

The 't – tests' calculated for observing the effect of combined package, showed all its values as significant at $p = 0.01$ for the two tailed test, leaving the area of 'Negativism'.

4.5 COMPARATIVE ANALYSIS ON EFFECTIVENESS AMONGST THE TREATMENT CONDITIONS : BDI OVERALL SCORES

Attempt was made in this section to perform a comparative analysis amongst the EG treatments conditions. In other words effectiveness has been measured as a function of mean difference from pre to the post tests in each of the conditions. Since the values in previous sections have been calculated through ‘t-test’ same have been utilized. There values indicates a significant difference for all the conditions making comparisons on mean scores more simpler. The results are mentioned in the table below :

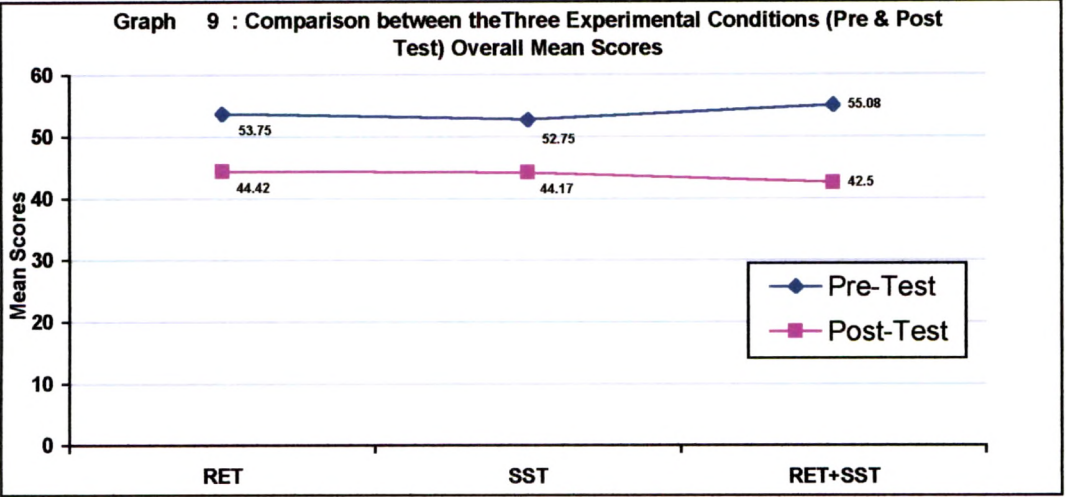
Table 25 : Comparison of means in the experimental conditions

Tests	RET	SST	Combined Package
	Mean scores		
Pre test	53.75	52.75	55.08
Post test	44.42	44.17	42.50

The results indicate, maximum mean scores, 55.08 (S.D : 2.84) for the combined package, at pre-tests closely, the group exposed to RET followed, with mean scores of 53.75 (S.D : 2.38). SST group, in comparison showed minimum mean score, 52.75 (S.D : 2.80), before interventions.

At post tests, mean score obtained for the combined group was 42.50 (S.D : 1.93). RET group again showed significant change, with mean value of 44.42. Lastly, the SST group displayed its mean score as 44.17 (S.D : 2.79).

The results and line graph above make evident the maximum impact, made by the combined package in reducing aggression. This was followed by the RET group. Finally, comparatively a lesser impact has been observed for the SST group.



4.5.1. Comparative Analysis on Effectiveness Amongst the Therapeutic Conditions : BDI Subscales

Mean comparisons between the experimental groups were made to measure the relative effectiveness of therapies on varied subscales of the inventory.

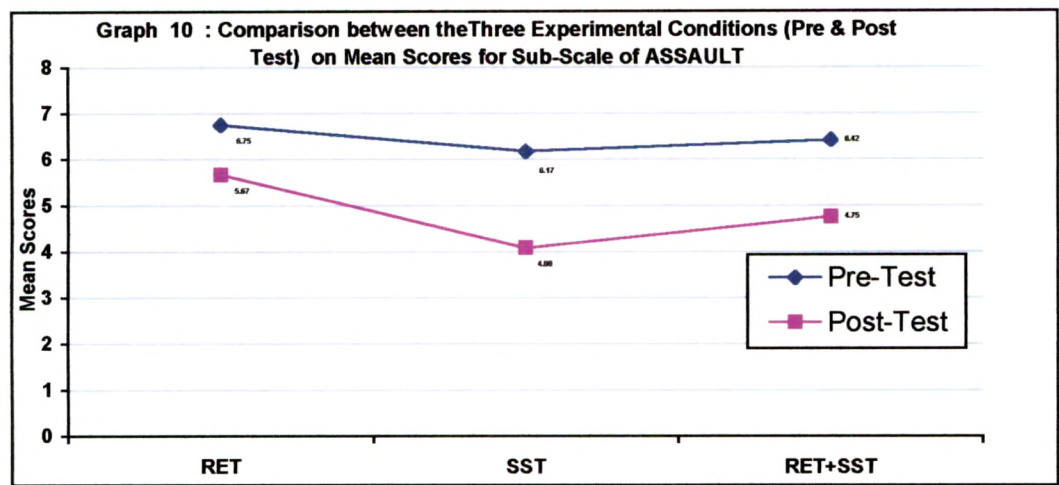
- 1. **ASSAULT** : the mean scores on this subscale were compared for the three conditions, as mentioned in the table below.

Table 26 : Comparative mean analysis of EG conditions on ‘Assault’ subscale.

Tests	CONDITIONS		
	RET	SST	Combined package
Pre test (mean)	6.75	6.17	6.42
Post test (mean)	5.67	4.08	4.72

In pretests the RET group projected a mean value of 6.75 (S.D : 0.97). At post-tests, the value reduced to 5.67 (S.D : 1.07). For SST experimental group, the mean scores displayed was 6.17 (S.D : 1.64) and a change to 4.08 was observed at post tests. The group which was administered the combined package

revealed a mean score of 6.42 (S.D : 1.31) in pre tests and 4.75 (S.D : 0.87) at post tests.



When the three conditions were compared, it was observed, the intervention with SST programme made maximum impact on ‘assault’ followed by combined package. Relatively, least impact of RET was noted.

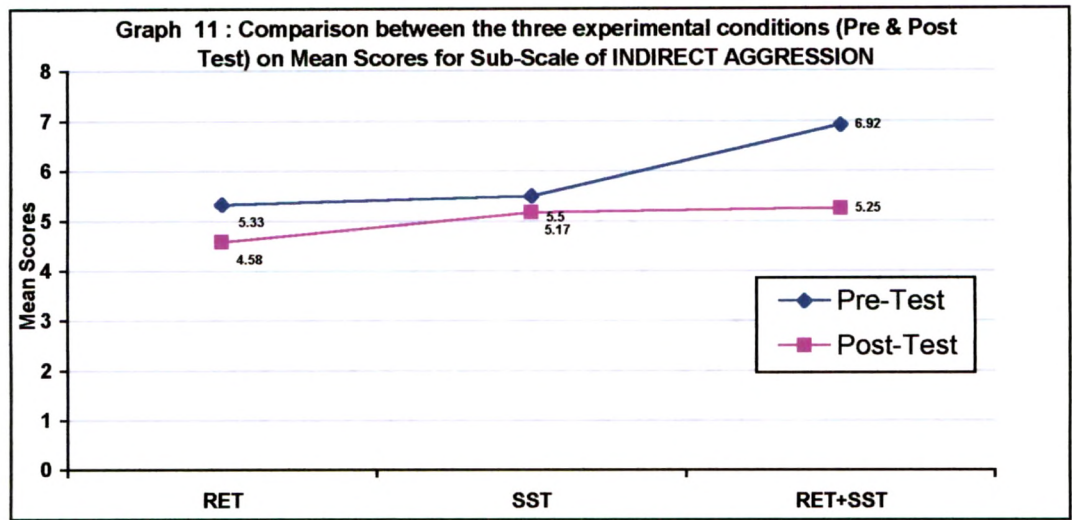
2. **INDIRECT** : The second subscale comprising of ‘Indirect aggression’ manifested the following results. Table 27 makes comparisons between the means in these three conditions.

Table 27 : Comparative analysis of EG means on ‘Indirect’ subscale.

Tests	CONDITIONS		
	RET	SST	Combined Package
Pre test (mean)	5.33	5.50	6.92
Post test (mean)	4.58	5.17	5.25

In pretests, RET-EG group disclosed, an average of 5.33 (S.D. : 1.15). These scores declined to 4.58 (S.D. : 0.90) at post tests. SST group, showed a mean value of 5.50 (S.D. : 1.68) in pre tests. This value decreased further to 5.17

(S.D : 1.47) at post tests. The combined package revealed mean of 6.92 (S.D : 0.90) at pre test. At post tests this value was observed as 5.25 (S.D. : 1.42).



Graph 11 distinctly shows, maximum impact of combined package on ‘Indirect’ aggression. Second most effective therapy was RET, followed by the SST intervention.

3. NEGATIVISM

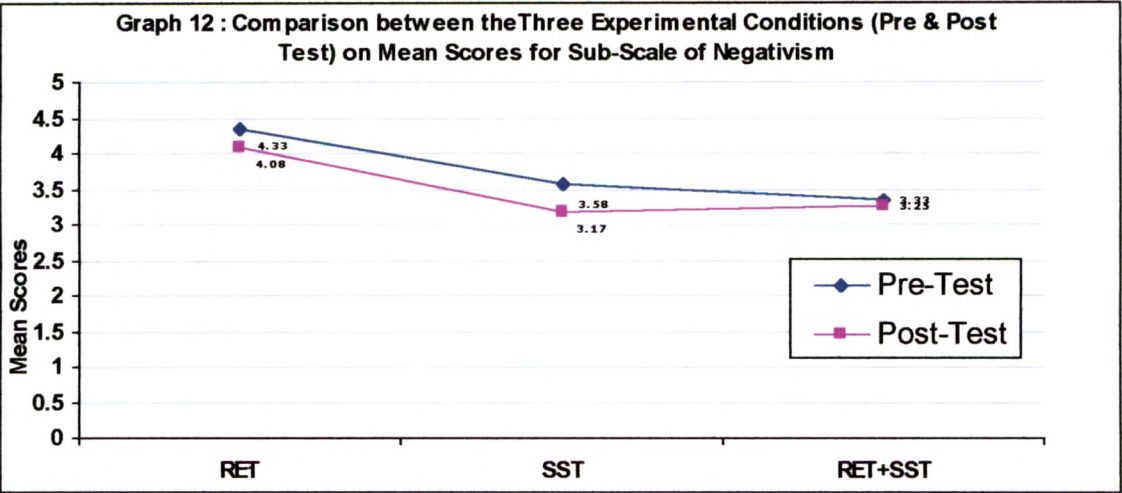
‘Negativism subscale’ noted the following mean scores for three conditions. Table-28 makes these comparisons.

Table 28 : Comparative analysis of EG means on Negativism.

	CONDITIONS		
Tests	RET	SST	Combined package
Pre test (mean)	4.33	3.58	3.33
Post test (mean)	4.08	3.17	3.25

The mean score of RET group at pre test was 4.33 (S.D : 0.98). At post tests a decline was seen in the scores to 4.08 (S.D : 0.79). The group delivered with

social skills training showed mean value of 3.58 (S.D : 1.38). Post tests showed some reduction in mean values to 3.17 (S.D : 1.03). The combined package group showed pre test mean scores as 3.33 (S.D : 0.78). On post tests, this value was observed as 3.25 (S.D : 0.75).



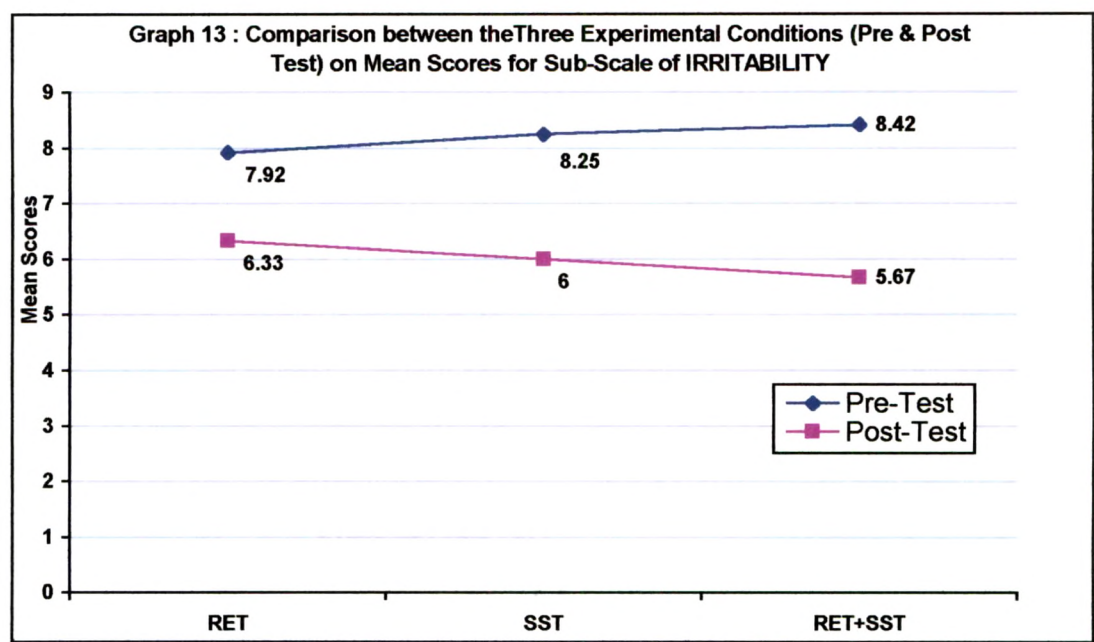
Graph 12 represents the accurate comparisons and representation. The SST condition proved relatively most effective amongst the three conditions. Closely touching were the results of RET group. Combined package showed least impact here. It should be noted that ‘negativism’ subscale was not handled effectively by any of the therapies as the t-tests indicate. However, here comparisons having been based on the relative effectiveness in bringing down the scores on the component.

4. **IRRITABILITY** : Next Subscale measured the individual on ‘Irritability’. Following results were obtained for the three experimental group; as can be seen from the table below.

Table 29 : Comparative analysis of EG means on Irritability

Tests	RET	SST	Combined package
Pre test (mean)	7.92	8.25	8.42
Post test (mean)	6.33	6.00	5.67

The table above shows, pre test means of RET, SST and combined package groups as 7.92 (S.D. : 1.24), 8.25 (S.D. : 1.14), 8.42 (S.D. : 1.16) respectively. At post tests the maximum change in mean scores was seen for the combined package group 5.67 (S.D. 0.98). Evident closely was the impact of SST with an average of 6.00 (S.D. : 1.48). Relatively least impact of RET was observed on this variable.



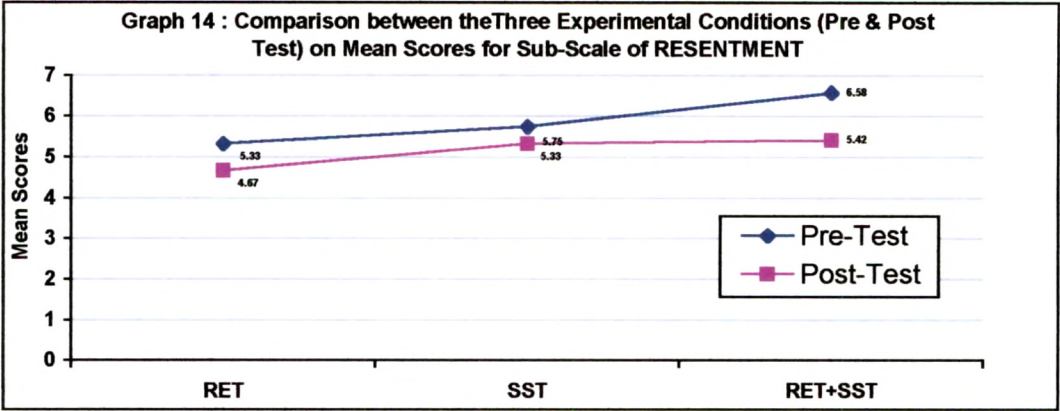
The line graph here depicts this picture more clearly where the parallel lines starting from RET to SST, get further apart from in pre tests to post posts and a wide gap is observed in the condition of combined package group at the two intervention stages.

5. **RESENTMENT:** The subscale on ‘Resentment’, tried to compare and evaluate the effectiveness amongst the three therapies. Table 30 has tried to compare the means of EG conditions.

Table 30 : Comparison of mean scores of EG Resentment

Tests	RET	SST	Combined package
Pre test (mean)	5.33	5.75	6.58
Post test (mean)	4.67	5.33	5.42

Graph interestingly shows a little and a congruent variation in the mean scores of RET and SST from pre to post tests. The mean values in pre tests were 5.33 (S.D.:0.84) and 5.73 (S.D.:1.14) respectively for the two groups. Correspondingly these scores for RET and SST groups have changed to 4.67 (S.D.: 1.07) and 5.33 (S.D.:0.89) respectively at post tests. The table above shows the maximum change and impact of the combined package on the resentment subscale. Its pre-test results determined a mean score of 6.58 (S.D. : 0.79) followed by post-test mean scores of 5.42 (S.D. : 1.00). RET was second in the list for its impact, followed by SST.

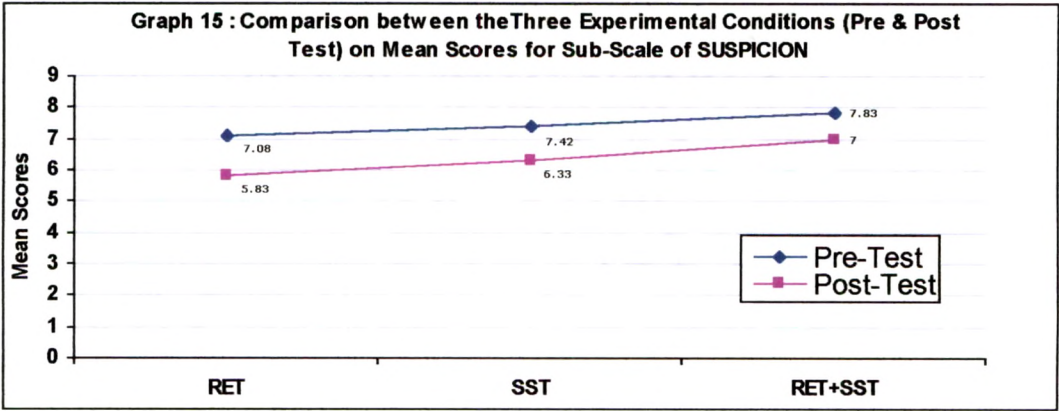


6. **SUSPICION** : ‘Suspicion’ subscale gave the following comparative analysis for the three experimental groups.

Table 31 : Comparative analysis of mean scores of EG on suspicion

Tests	RET	SST	Combined package
Pre test (mean)	7.08	7.42	7.83
Post test (mean)	5.83	6.33	7.00

On the subscale of ‘Suspicion’ the RET mean score at pretests were seen as 7.08 (S.D.:1.51). For SST and combined package again pre test mean scores lied in the same plane with values of 7.42 (S.D. : 1.62) and 7.83 (S.D. : 1.59) respectively. In post tests all the mean scores declined, as evident from Table.

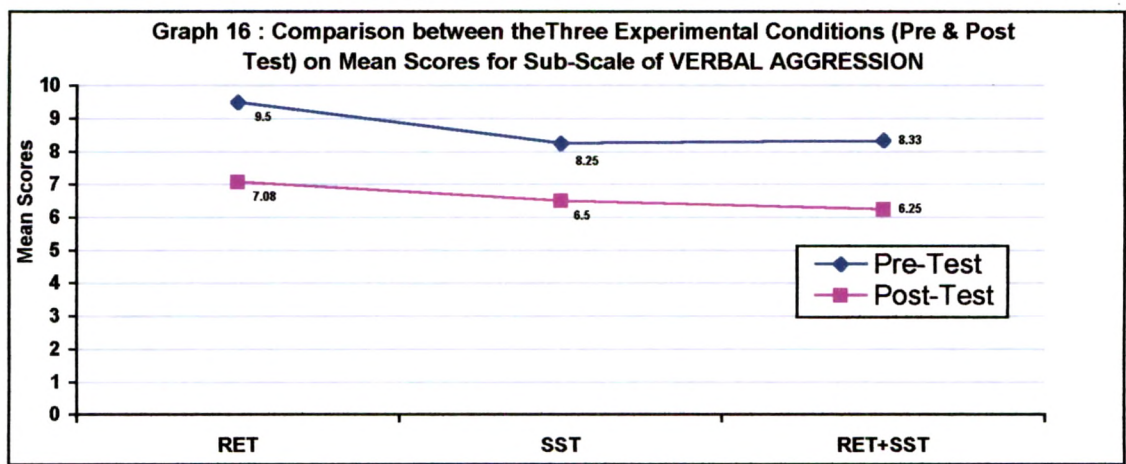


A parallel trend of lines is observed for the first two experimental groups. Minimum change is seen for the combined group; where the pre and post test results are nearing to each other. Second to it, is the SST group. While RET proves most effective amongst the three conditions on this subscale.

7. **VERBAL** : Comparisons on the effectiveness amongst the three therapies were again made on verbal aggression subscale by reflecting on the EG mean values of the three groups.

Table 32 : Comparative analysis of EG mean scores on verbal aggression

Tests	RET	SST	Combined package
Pre test (mean)	9.50	8.25	8.33
Post test (mean)	7.08	6.50	6.25



The pre test scores here indicate mean scores for RET group as seen as 9.50 (S.D. : 1.00) post tests however show a visible change with mean score of 7.08 (S.D. : 1.00). for the SST therapeutic group, pre test scores on verbal aggression were 8.25 (S.D. : 1.42). This significantly declined to 6.50 (S.D. : 0.67) at post tests. In case of combined therapy group the pre test mean scores were seen as 8.33 (S.D. : 1.44). While post tests scores revealed mean value of 6.25 (S.D. : 1.48).

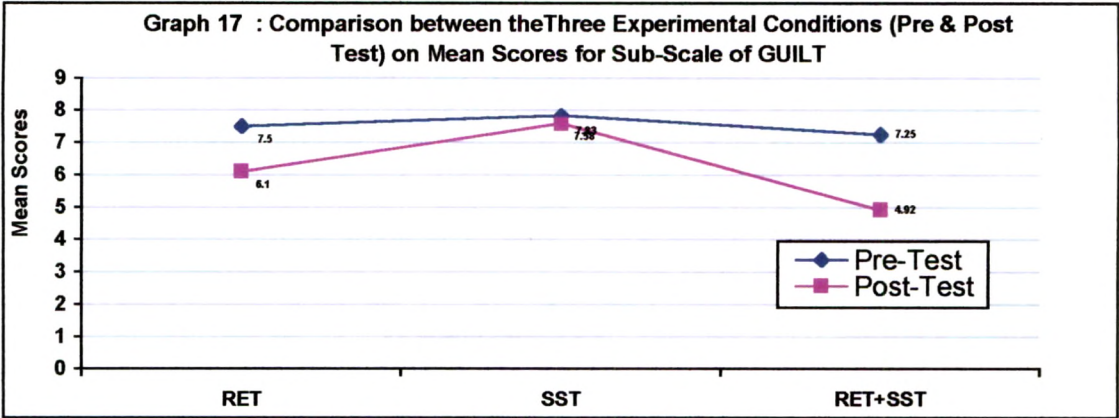
Comparing the three experimental group conditions – RET has had maximum impact on reducing verbal aggression followed by the combined package and closely come across the training given through social skills.

8. **GUILT** : The last subscale on ‘Guilt’ evaluated the following comparative results amongst the three groups Table displays it as follows :

Table 33 : Comparative analysis of EG means on Verbal aggression

Tests	RET	SST	Combined package
Pre test (mean)	7.50	7.83	7.25
Post test (mean)	6.17	7.58	4.92

The pretest mean scores for RET were observed as 7.50 (S.D. : 1.45). However the post test scores showed drop in mean value to 6.10 (S.D. : 1.03). When the SST mean scores were observed, a mean value of 7.83 (S.D. : 1.03) was seen at pre test’s. The post test means hardly showed any change with observed mean value of 7.58 (S.D. : 0.90). Further the combined group disclosed an average of 7.25 (S.D. : 1.22) at pre tests. At post tests this mean scores tremendously dropped down to 4.92 (S.D. : 1.08).



The line graph comparing the three conditions, reveals a very interesting trend here. The lines drop down significantly for RET and combined group but almost collide for the SST experimental group. This shows a hardly contributable change provided by SST. Whereas, maximum impact was seen by combined package group, followed by the training given to the adolescents on RET.

**4.6. GENDER COMPARISON ON AGGRESSIVE BEHAVIOUR :
(BDI Overall Scores)**

A comparative analysis between means of male – female populations on their overall and subscale scores, before (pre) and after intervention (post tests) have been made with reference to CG and EG in this section. The CG results have been additionally mentioned (not stated in the hypothesis) to observe the result trends of the group not exposed to any therapeutic conditions.

Comparisons between CG and EG overall mean scores have been shown in the table below at their pre tests.

Table 34 (i) : Mean and S.D. comparison of (CG and EG) male – female populations on their pretest results.

	BOYS (PRE TESTS)		GIRLS (PRE TESTS)	
	Mean	S.D.	Mean	S.D.
CG	54.67	3.33	53.22	2.65
EG	53.17	2.85	54.56	2.59

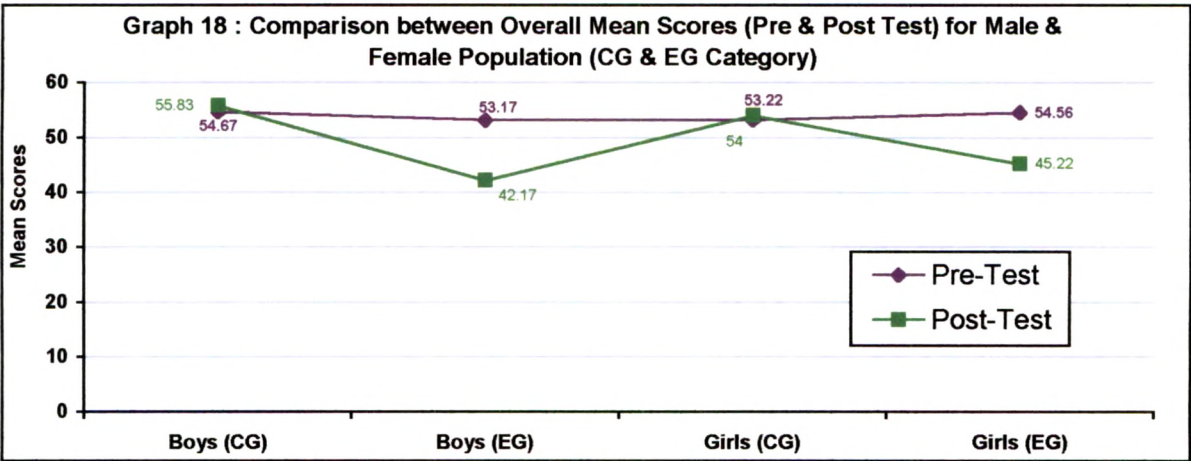
Table 34 (ii): Mean and S.D. comparison of (CG and EG) male – female populations on their post test results.

	BOYS (POST TESTS)		GIRLS (POST TESTS)	
	Mean	S.D.	Mean	S.D.
CG	55.83	2.87	54.00	2.45
EG	42.17	2.38	45.22	2.92

The comparison between male and female population of EG on their pre tests [Table 34 (i)] showed the overall aggression scores for boys as 53.17 (S.D. : 2.85). The girls in comparison revealed a slightly higher mean score of 54.56

(S.D. : 2.59). The obtained t value of 1.52 (df = 18) showed significant difference between the genders before intervention at 0.01 level.

In case of the ‘Control group’ a mean value of 54.67 (S.D. : 3.33) was observed at pre-tests. While girls of CG again disclosed a slightly lower mean score of 53.22 (S.D. : 2.65). The t calculated was 1.44 (df = 18). This value was insignificant at 0.01 level. The results thus reveal no significant differences between the genders on their overall aggressive behaviour at pre tests. The Graph 18 is displaying this condition very clearly.



At post tests [Table 34 (ii)] the comparison between genders for EG disclosed, scores decreasing to 42.17 for boys, while the girls means score was noted as 45.22 (S.D. : 2.92). The t calculated was 1.44 (df =18) which was insignificant at 0.01 level. Thus the overall scores prove no significant differences between genders after intervention.

When the CG gender comparisons were made it was observed that boys mean score was 55.83 (S.D. : 2.87) which meant significant difference between the gender in their overall aggressive behaviour.

In case of girls, their scores didn’t show much changes from pre to post tests; with mean score of 54.00 (S.D. : 2.45). The obtained t-value of 2.05 (df = 18)

was insignificant at 0.01 level. The results prove for no significant differences between genders at post tests for the CG.

In case of females, their CG mean scores in pre test shows a similar trend, as in the case of males. Here in mean scores have not varied much, from their pre to post tests. The EG for females shows a downward trend, with values decreasing from 54.56 to 45.22.

4.6.1. Gender Comparison On Aggressive Behaviour (BDI Subscales)

This objective of the study tried to compare the aggression of males and females in CG and EG on the subscales of the BDI. The subscales of CG has been mentioned to provide additional evaluative information. It does not constitute a part of any of the hypothesis being checked.

Table 35 (i) indicates the mean and S.D. scores of male and females in their pre tests on the subscales of B.D.I. in their experimental and control conditions. The table brings in sight the differences between the two population before intervention.

Table 35 (i) : Mean and S. D. (Pre test score) comparisons between boys and girls for CG on aggression subscales

SUBSCALES	(PRE TESTS C.G.)			
	BOYS		GIRLS	
	Mean	S.D.	Mean	S.D.
1. Assault	7.44	1.20	5.89	1.60
2. Indirect	6.11	1.49	6.50	1.25
3. Negativism	4.67	1.33	4.28	1.23
4. Irritability	7.56	1.15	7.83	1.10
5. Resentment	5.89	0.68	6.33	1.08
6. Suspicion	6.72	1.23	7.11	1.41
7. Verbal	8.67	1.41	8.06	1.21
8. Guilt	7.61	1.24	7.22	1.17

Table : 35 (ii) Mean and S. D. (Pre test score) comparisons between both genders for EG on aggression subscales

SUBSCALES	(PRE TESTS E.G.)			
	BOYS		GIRLS	
	Mean	S.D.	Mean	S.D.
1. Assault	7.00	0.91	5.89	1.45
2. Indirect	5.61	1.50	6.22	1.35
3. Negativism	3.56	1.15	3.94	1.11
4. Irritability	8.06	1.06	8.33	1.28
5. Resentment	5.83	0.92	5.94	1.21
6. Suspicion	6.61	1.33	8.28	1.32
7. Verbal	8.83	1.76	8.56	0.92
8. Guilt	7.67	1.19	7.39	1.29

Control Group : Pre test comparisons between male and female populations :

As the data in the table 35 (i) attracts attention : In the control group on the subscale of ‘Assault’, the mean score of boys is 7.44 (S.D. : 1.20) while that for girls is comparatively much less, with mean of 5.89 (S.D. : 1.60). The calculated t value of 3.29 (df = 18) reveals a significant difference between the genders at 0.01 level for the CG groups.

In contrast to ‘Assault’, the component of ‘Indirect’ aggression reveals a lesser mean score (6.11) and (S.D. : 1.49) for boys as compared to girls who indicated mean of 6.50 (S.D. : 1.25). The observed t value of 0.84 (df = 18) was insignificant at 0.05 level. The results indicate no differences between reactions of the genders, in this area.

The third area on the subscale measuring 'Negativism', displayed a mean score of 4.67 (S.D. : 1.33) for boys as higher than those for girls, with mean of 4.28 (S.D. : 1.23). no difference amongst genders was conspicuous on this omcponent with a t value of 0.91 insignificant at 0.01 level.

On the subscale of 'Irritability', boys displayed a mean of 7.56 (S.D. : 1.15). In this area, girls tend to be more irritable as mean score of 7.83 (S.D. : 1.10) indicate. The calculated t value of 0.74 was insignificant at 0.01 level.

The area of resentment, represented the males mean score as 5.89 (S.D. : 0.68). The females scored higher here with an average score of 6.33 (S.D. : 1.08). The calculated t value was 1.47 (df = 18) which was insignificant at 0.01 level.

The sixth subscale on 'Suspicion' made conspicuous for a much lesser mean score for boys, with an average score of 6.72 (S.D. : 1.23), while girls average score was 7.11 (S.D. : 1.41). A calculated t value of 0.88 (df = 18) was insignificant at 0.01 level.

Comparisons on Verbal aggression between boys and girls reveals, boys use slightly more of verbal expression while giving vent to their inert anger, as can be see from mean score of 7.61 (S. D : 1.24) as compared to girl, who indicated for a mean score of 7.22 (S.D. : 1.17). However the t value of 1.39 (df = 18) was insignificant at 0.01 level.

In the area of 'Guilt' boys pre test mean scores was 7.61 (S.D. : 1.24). Closely followed by girls with a mean score of 7.22 (S.D. 1.17). The t value of 0.96 (df = 18) was found insignificant at 0.01 level.

Experimental Group : Pre test comparisons of both sexes : The EG subscale of 'Assault' for boys displayed a mean value 7.00 (S.D. : 0.91), with girls scoring comparatively lesser on this subscale; mean 5.89 (S.D. : 1.45). The 't-test' generated a value of 2.75 (df = 18). The value was found as significant at 0.05 level.

On the area of 'Indirect' aggression, again as seen for CG, a similar trend was observed for EG. The boys scored mean of 5.61 (S.D. : 1.50); while girls scored a higher mean score of 6.22 (S.D. : 1.35). The 't' obtained was 1.28 (df = 18) which was insignificant at 0.01 level. Thus showing no significant difference between the two genders.

A reverse trend was seen in the area of 'Negativism', when EG was compared with CG. The boys mean score of 3.56 (S.D. : 1.15) was much lesser than for girls with 3.94 (S.D. : 1.11). The t tests gave a value of 1.03 (df = 18). This value was insignificant at 0.01 level. It could be interpreted that both boys and girls possess this component equally.

On the next subscale of 'irritability' the pre test scores of boys with mean 8.06 (S.D. : 1.06) was slightly lesser than that for girls 8.33 (S.D. : 1.28). On the subscale of irritability a t value of 0.389 (df = 18) showed no significant difference between the populations.

The scale on 'Resentment' showed, boys being less resentful than girls, with a mean score of 5.83 (S.D. : 0.92) and girls with 5.94 (S.D. : 1.21). An obtained t value of 0.30 (df = 18) was insignificant at 0.01 level when compared with the table values.

In the area of 'Suspiciousness', the male population with mean 6.61 (S.D. : 1.33) is lesser suspicious than females, disclosing means of 8.28 (S.D. : 1.32). A starking discrepancy is seen amongst both the sexes, in this area, on their pretest means. The t test's with a calculated value of 3.76 (df = 18) also reveals a significant difference between genders in the area of 'suspicion'.

The subscale on 'verbal' aggression doesn't show much of a difference in the mean scores of boys, 8.83 (S.D. : 1.76) and here girls stand closely near with mean 8.56 (S.D. : 0.92). The pre test scores thus imply girls being equally 'verbally' aggressive as compared to boys. The 't-tests' gave a value of 0.59

(df=18) which was insignificant at 0.01 level. Thus showing no difference in the expression of Verbal aggression.

On the last subscale of ‘Guilt’ the males possess less of Guilt (mean 7.67, S.D. : 1.27) as compared to females of EG (mean 7.39, S.D. : 1.29). The results of the CG, on the contrary showed males to be possessing a fraction of ‘Guilt’ more than females. The t tests produced a value of 0.67 (df = 18) which was insignificant at 0.01 level.

Viewing the EG conditions, at pre tests, the t-test results calculated a significant difference on the subscales of ‘Assault’ and ‘Suspicion’. No significant differences were seen on any other subscales.

The Graphs below brings forth the conditions of EG and CG more clearly with clear distinctions between the mean scores of the two sexes on the pre and post test conditions.

Next the comparisons of CG and EG of both the sexes were made for the different subscales of aggression.

Table 36 (i) : Means and S.D.’s (Post test score comparisons) for CG between genders on aggression subscales.

Subscales	(POST TESTS C.G.)			
	BOYS		GIRLS	
	Mean	S.D.	Mean	S.D.
1. Assault	7.61	1.09	6.00	1.53
2. Indirect	6.28	1.53	6.50	1.25
3. Negativism	4.78	1.22	4.50	1.15
4. Irritability	7.83	1.10	8.00	1.19
5. Resentment	6.00	0.77	6.44	1.04
6. Suspicion	6.89	1.18	7.06	1.39
7. Verbal	8.94	1.30	8.28	1.07
8. Guilt	7.50	1.29	7.22	1.17

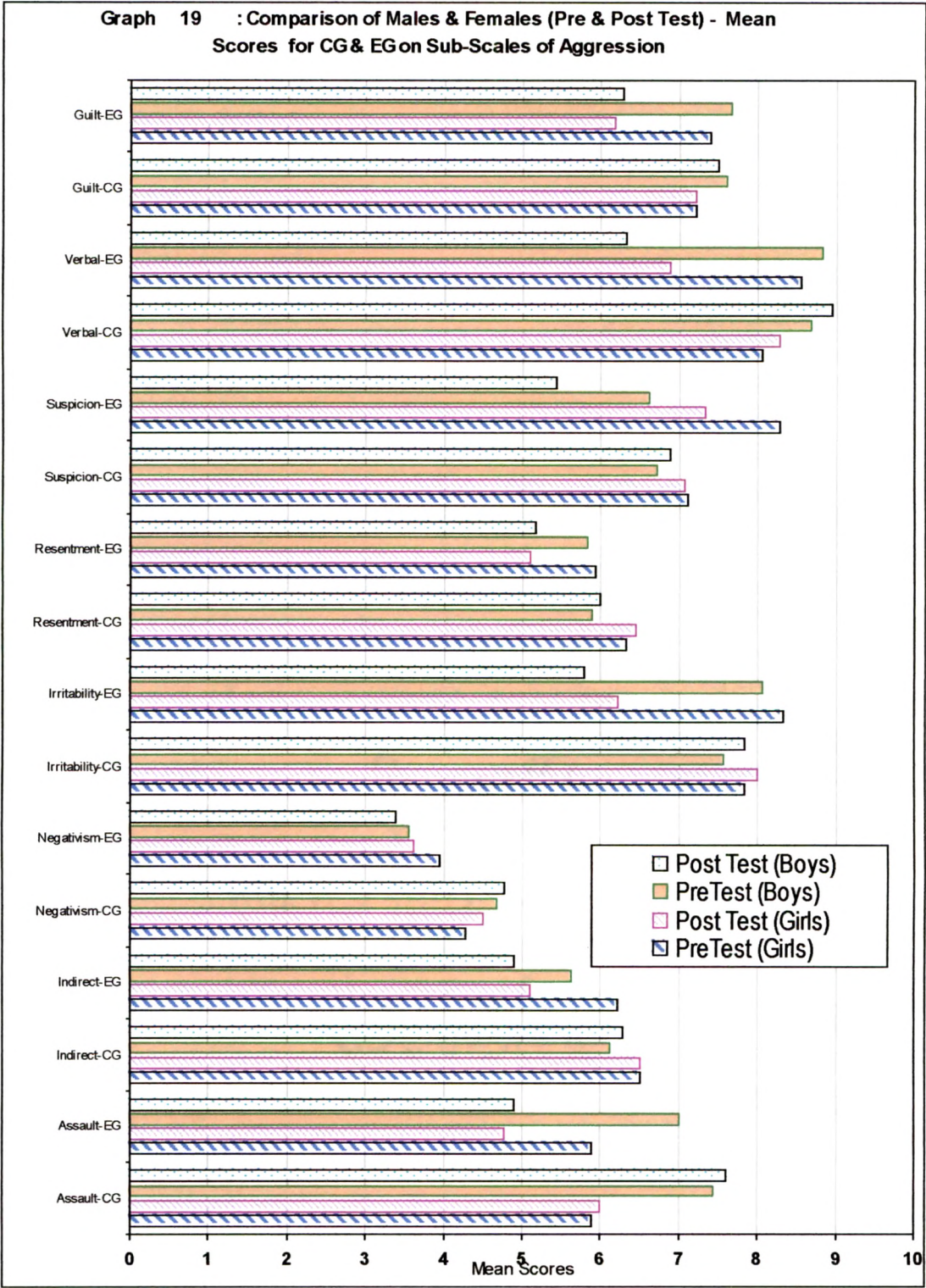


Table 36 (ii) : Means and S.D.'s (Post test score comparisons) for EG between the genders on aggression subscales.

Subscales	(POST TESTS E.G.)			
	BOYS		GIRLS	
	Mean	S.D.	Mean	S.D.
1. Assault	4.89	1.23	4.78	1.06
2. Indirect	4.89	1.37	5.11	1.23
3. Negativism	3.39	1.04	3.61	0.85
4. Irritability	5.78	1.31	6.22	1.17
5. Resentment	5.17	0.62	5.11	1.32
6. Suspicion	5.44	1.50	7.33	1.19
7. Verbal	6.33	1.24	6.89	0.96
8. Guilt	6.28	1.27	6.17	1.69

Control Group : Post test comparison of genders on BDI subscales : The post test results of CG revealed the following information :

On the subscale of ‘Assault’ boys showed a mean value of 7.61(S.D. : 1.09), while girls mean value was evaluated as 6.00 (S.D. : 1.53). The results showed an increase in average values for both boys and girls. A significant $t = 3.63$ ($df = 18$) was found at 0.01 level. Thus showing significant differences between the genders on the assault component.

‘Indirect’ component of aggression disclosed a mean of 6.28 (S.D. : 1.53) for males and 6.50 (S.D. : 1.25) for females. A comparison with their pre test scores show a negligible increase at post test for both the sexes on this component. The t value of 0.47 was insignificant at 0.01 level.

The area of 'Negativism', recognized a mean of 4.78 (S.D. : 1.22) for males, while females were not far behind in their post test scores with mean of 4.50 (S.D. : 1.15). Not much change in mean scores was observed from pre to post scores for both the sexes. The component didn't show any significant difference between the genders, with the obtained $t=0.70$ ($df = 18$) at 0.01 level.

Irritability subscale for CG, made apparent a average of 7.83 (S.D. : 1.15) for males and 8.00 (S.D. : 1.10) for females. A small increment is observed here in the scores of both the sexes. An obtained $t = 0.43$ ($df = 18$) was insignificant at 0.01 level. Thus post tests don't reveal any significant differences between genders.

Resentment scale exposed a mean of 6.00 (S.D. : 0.77) for boys and 6.44 (S.D. : 1.04) for girls. When compared with the pre tests, we find a minute increase in case of boys from pre to post tests, while on the other hand a decline in mean scores was observed in this component for the female population, in the period interval. Resentment subscale, gave a $t = 1.45$ ($df = 18$) which showed insignificant differences between the genders at 0.01 level.

The next subscale on suspicion manifested a mean value of 6.89 (S.D. : 1.18) for males and 7.06 (S.D. : 1.39) for females. Comparing with their pre test result a downward trend is recognized for both the populations at post tests. However, the t value of 0.38 ($df = 18$) is insignificant difference between the genders at 0.01 level.

The subscale on 'Verbal' aggression made a conspicuous mean score of 8.94 (S.D. : 1.30) for boys. While for girls as well a minute ascent was observed, 8.28 (S.D : 1.07). The t value of 1.67 ($df = 18$) was insignificant at 0.01 level. Thus showing no difference between genders in verbal aggression.

The subscale of 'Guilt' exposed a mean 6.28 (S.D. : 1.27) for boys and 6.17 (S.D. : 1.69) for girls strangely, a marked decline is observed for males, while

no change is observed in the mean scores of female population in the post test. The guilt subscale produced a t value of 0.67 ($df = 18$) which was insignificant at 0.01 level.

Experimental Group : Post test comparison of gender on BDI subscales :

The post test results of EG gave the following insight :

The first subscale of 'Assault' indicated a mean of 4.89 (S.D. : 1.23) for males and an average value of 4.78 (S.D. : 1.06) for females. The results prove an impact of therapy in lowering the post test mean scores, for males and a slightly lesser fall in the mean scores of female population. However the t test only reveal a calculated value of 0.29, which was insignificant at 0.01 level. Showing no differences in responses to treatments at post tests.

The second area of 'Indirect' aggression showed trend of decline in the post test scores, for both sexes. However, it is evident from the tables that girls have responded more positively to the therapeutic intervention, showing mean scores 6.22 (S.D. : 1.35), as compared to boys with mean 5.61 (S.D. : 1.50). When t tests were conducted a value of 0.51 ($df = 18$) didn't show any significant difference between the populations as result of therapeutic intervention.

The component on 'Negativism' displays, a little change for both the populations in their post tests. The mean score of boys 3.39 (S.D. : 1.04) and girls 3.61 (S.D. : 0.85) we analyse, both are almost on the same edge, after the application of therapeutic tools. 'Negativism' gave a t value of 0.70($df = 18$). The value was again insignificant at 0.01 level.

The fourth subscale of 'Irritability' determined very conspicuous changes in the mean scores of both the sample populations on post tests. It seemed as both had responded quite congruently to the interventions. Whereas the male population scored a mean value of 5.78 (S.D. : 1.31), the females displayed an average of 5.11 (S.D. : 1.32). However the t value obtained of 1.07 didn't show any significant difference at 0.01 level.

The fifth component of 'Resentment' expresses a mean score 5.17 (S.D. : 0.62) for boys while girls showed a mean value of 5.11 (S.D. : 1.32). Both the groups show little decline at their post intervention scores. The calculated t value was 0.161 (df = 18) which was insignificant at 0.01 level. Thus showing no significant difference in genders towards their sensitivity to the experimental conditions.

In the next area on 'Suspicion' again similar pattern of responding becomes evident for both genders. In case of males a fall in the average scores 7.33 (S.D. : 1.19) is observed in the post test. While the female population closely shows a decrease in their levels of 'Suspicion' after the termination of the therapeutic process (mean 7.33 (S.D. : 1.19). The t-test conducted gave a value of 4.18. This value was seen as highly significant at 0.01 level.

On the subscale of 'verbal' aggression both the sexes from pre to post tests, distinctly show decrease in their verbal expressions. In the post tests, boys showed mean scores of 6.63 (S.D. : 1.24), while girls displayed mean of 6.89 (S.D. : 0.96). As the mean scores indicate, boys have responded slightly more to the treatments given as compared to girls. The verbal aggression scale observed a 't' value of 1.50. This value was insignificant at 0.01 level.

Lastly, on the feeling associated with 'Guilt' a remarkable reduction is seen from pre to post test scores, for males as well as females. The male population showed a mean score of 6.17 (S.D. ; 1.69) while females, reflected an average of 6.28 (S.D. : 1.27). The calculated t value was 0.22 which was not significant at 0.01 level. Thus showing both genders responding at par to the exposed therapies.

The graphs 19 depicts a clear comparison on the post mean scores of the two sexes, on the subscales of aggression. Through these graphs a precise and explicit picture emerges on the impact of therapy in the (EG).

4.7. BIRTH ORDER AND AGGRESSION

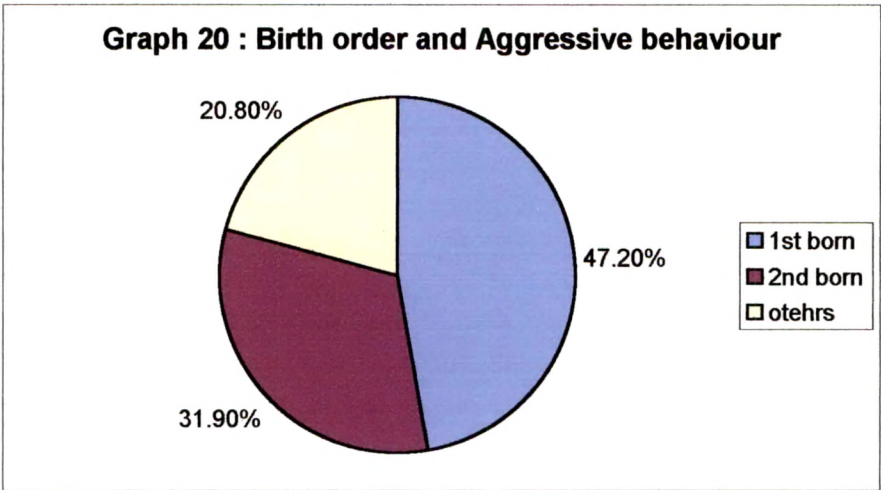
Forth coming section has analysed the relation between birth order and aggression. Individuals scoring high on the BDI were checked out for their birth order from the ‘General Information Form’. Frequency percentage distribution of adolescents belonging to the various birth orders have been evaluated. The task has been culminated to know, which birth order tends to be most aggression amongst all birth orders.

Table 37 : Frequency percentage distribution of birth order amongst aggressive adolescents

Birth order in family	Aggressive simple	Percentage Scores
1 st born	34	47.2 %
2 nd born	23	31.9 %
Others	15	20.8 %

The total no. of individuals (CG + EG) group : 72.

Graph 20 shows the above mentioned relationship more clearly



It was evident that 1st born individuals displayed higher aggressive behaviour (47.2%) as compare to 2nd born revealing a percentage score of (31.9 %). Lastly the individuals who were in other orders disclosed least aggressive behaviour (percentage score : 20.8 %) as can be seen from the table above.

4.8. FAMILY PATTERN AND AGGRESSIVE BEHAVIOUR

To investigate the relation between family system and aggression – individuals scoring high on BDI were checked for there family system (nuclear / joint family).

The family pattern of ‘Nuclear’ and ‘Joint families’ has been considered here. Frequency distribution percentages amongst the aggressive adolescents have been targeted to find the family type or pattern to which a majority of the population belongs. The total number of individuals comprising the sample were 72.

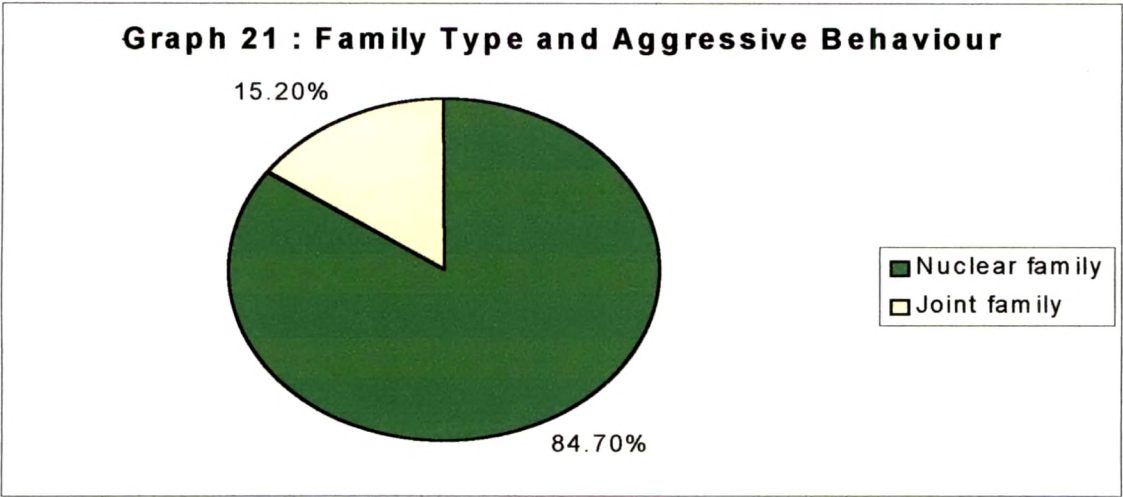
Results are presented in the table below :

Table 38 : Frequency percentage distribution of the family pattern amongst aggressive adolescents

Family system	Aggressive sample	Percentage scores
Nuclear family	61	84.7 %
Joint family	11	15.2 %

The total no. of individuals comprising the sample were 72.

Graph 21 is conspicuously showing that majority of children having high scores on aggression belong to the nuclear families.



Results bring to notice that adolescents from nuclear families show more aggressive behaviour. Their percentage score evaluated for this sample was 84.7 %. While adolescents from joint family comparatively revealed lesser aggression. 15.2 % of the aggressive sample population belonged to joint families.