

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of the present research was to explore the “**Efficacy of CBT on Body Image, Emotional Competence and Self Esteem among College Students**”. Body Image is defined as internal cognitions, feelings, evaluations and behaviours related to one’s own appearance. The fact that body image dissatisfaction is no longer a western concept and it affects Indian youth to a great extent. In the last few decades there is a robust increase in the application of Cognitive Behaviour Therapy Interventions in both Clinical and Non Clinical population in bringing desired behavioural and psychological changes among them. From an Arts and Science College in Coimbatore, 48 college students with high Body Image and low Emotional Competence and Self Esteem were selected through purposive sampling method. The selected college students were administered by Personal Profile Sheet consisting of Demographic Details, Body Image Perception Scale was used to assess their level of Body Image, Emotional Competence Scale to assess their level of Emotional Competence and Multidimensional Self Esteem Inventory to assess their level of Self Esteem in three phases such as before, after and follow-up. The Cognitive Behaviour Therapy was given to them for 15 sessions for three months and the results are presented below:

Table 1 Demographic variable of the College Students

N=48

Demographic variable		Number	Percent
Gender	Male	14	29
	Female	34	71
Socio Economic Status	High	7	15
	Moderate	38	79
	Low	3	6
Place of Living	Urban	39	81
	Rural	9	19
Birth Order	First	13	27
	Last	6	12
	Middle	20	42
	Only Child	9	19

Percentages are rounded off

Table 1 shows the demographic data of the college students in the age range of 18-24 years constituted the sample of the study. Among the total 48 respondents 29% were males and 71 % were females; 15% of the participants were belonged to High class family, 79% of the participants were Middle class family and 6% were Low class family; 81% residing in urban e and 19% were rural area. 27% were First Born, 12% were Last Born, 42% were Middle Born and 19% were only Child.

Table 2: Mean and Standard Deviation of Bodily Distress College Students in Before, After and Follow-up Phases of Intervention.

Phases	Bodily Distress		
	N	Mean	S.D.
Before	48	45	3.71
After	48	26.73	2.97
Follow-up	48	27.48	3.20

Table 2 shows the mean and standard deviation of bodily distress of the participants before, after and follow-up intervention phases. The mean score for bodily distress before intervention was 45, and it got reduced to 26.73 after intervention and 27.48 in the follow-up phase. Weaver, Griffin and Mitchell (2014), revealed that severity of body image distress was significantly associated with depression and its symptoms. Hence it was important to teach some of the techniques to restructure their thoughts, emotions, behaviours and kind of relaxation should be given to change their distress.

Table 3 Repeated Measures ANOVA for Bodily Distress Before, After and Follow-up Phases of Intervention of the College Students

Phases	Sum of Squares	Df	Mean Square	N=48
				F
Sphericity Assumed	10261.85	2	5130.92	922.51**
Greenhouse-Geisser	10261.85	1.60	6426.87	922.51**
Huynh-Feldt	10261.85	1.64	6242.073	922.51**
Lower-bound	10261.85	1.00	10261.85	922.51**

** = Significant at 0.01 level

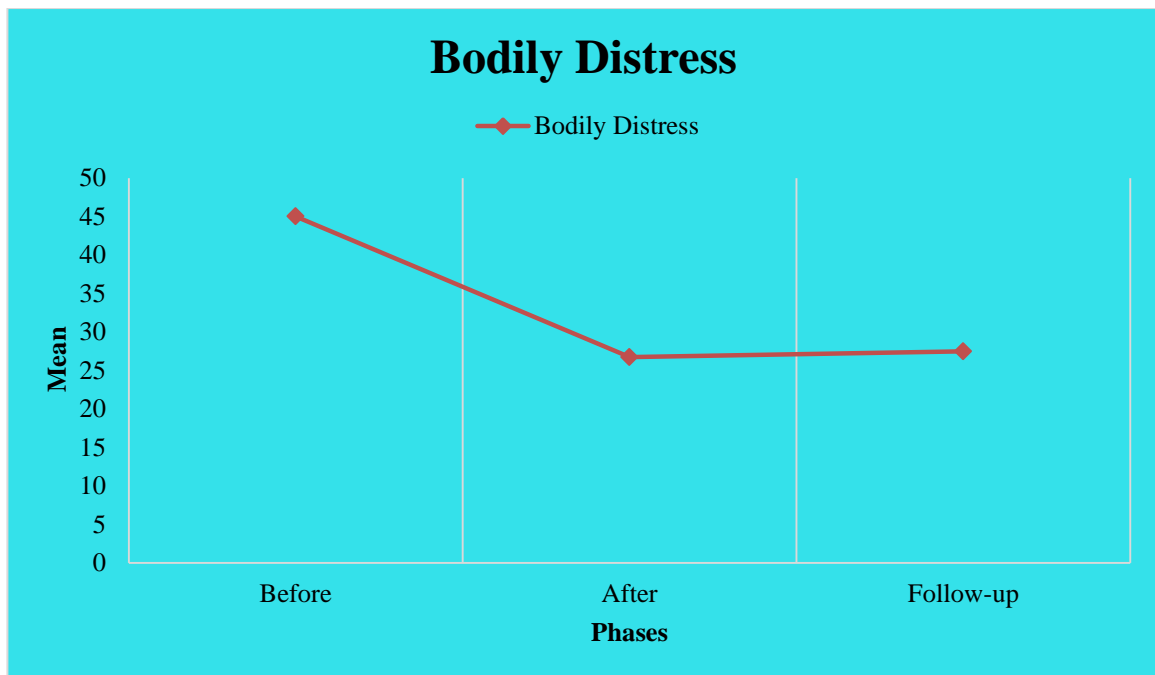


Figure 1

Figure 1 shows the comparison of Before, After and Follow-up Phases of Bodily Distress among College Students.

Table 5: Mean and Standard Deviation of Somatic Negative Feelings among College Students in Before, After and Follow-up Phases of Intervention

Phases	Somatic Negative Feelings		
	N	Mean	S.D.
Before	48	44.83	3.10
After	48	24.69	2.91
Follow-up	48	24.87	3.82

Table 5 represents the mean and standard deviation of somatic negative feelings among college students before, after and follow-up phases. The mean scores of somatic negative feelings before, after and follow-up were 44.83, 24.69 and 24.87 respectively. The intervention was effective in bringing change in the mean score of somatic negative feelings of the subjects. The interventions targeted at improving body image may decrease depressive and anxiety symptoms (Alur-Gupta, et al., 2019).

Table 6 Repeated Measures ANOVA for Somatic Negative Feelings during Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	12867.60	2	6433.80	588.46**
Greenhouse-Geisser	12867.60	1.75	7336.86	588.46**
Huynh-Feldt	12867.60	1.81	7084.24	588.46**
Lower-bound	12867.60	1.00	12867.60	588.46**

** = Significant at 0.01 level

Table 6 represents the results of Repeated Measures ANOVA for somatic negative feelings in before, after and follow-up phases among the college students and it clearly indicates the significant differences. The results showed that compared to before scores, there was a significant reduction in the level of negative feelings in after phases. Cognitive Behavioural Therapy emphasizes an inaccurate and unreasonable body image is highlighted and suggested through cognitive restructuring. Individuals frequently describe their inner experiences as painful events including thoughts, feelings, physiological sensations, impulses memories and take steps to avoid or lessen the intensity of these events. (Givehk et al., 2020). Psychoeducation on cognitive behaviour therapy helps the individuals to learn necessary social skills gives them greater hope for life and higher levels of adaptation. It also helps to substitute negative thoughts with more positive ones therefore it helps to boost their self confidence and self worth (Mohamadian, Bagheri, Hashemi, & Komeili Sani, 2018).

Table 7 Pairwise Comparisons for Before, After and Follow-up Phases in Somatic Negative Feelings among College Students

N= 48

Phases	Mean Difference	Standard Error
Before	After	20.15*
	Follow-up	19.96*
After	Before	-20.15*
	Follow-up	-18.8NS
Follow-up	Before	-19.96*
	After	18.8NS

* = Significant at 0.05 level

NS= Not Significant

Table 7 displays the pairwise comparison for somatic negative feelings in before, after and follow-up phases. Based on the significant reduction in the level of somatic negative feelings, Bonferroni post-hoc analysis was carried out to identify which particular differences between pairs of means are significant. The mean difference between before and after phases was 20.15, before and follow-up was 19.96 which were statistically significant, and after and follow-up was 18.80 which was not statistically significant. Liu, Gill, Teodorczuk, Li & Sun, (2018) suggested that cognitive behaviour therapy was an effective in reducing somatic, anxiety, depressed symptoms and improved physical functioning are among benefits of somatoform diseases. It also shows an effect on reducing physical symptoms, psychological distress, and disability will last, and it is helpful for treating somatoform disorders by reducing physical symptoms, psychological distress, and impairment. Therefore it can be concluded that the administration of the intervention was effective in the management of Somatic Negative Feelings among college students. Hence the Alternative Hypothesis 2 **“There will be a significant difference between Before, After and Follow-up Phases in Somatic Negative Feelings through Intervention among the College Students”** is accepted.

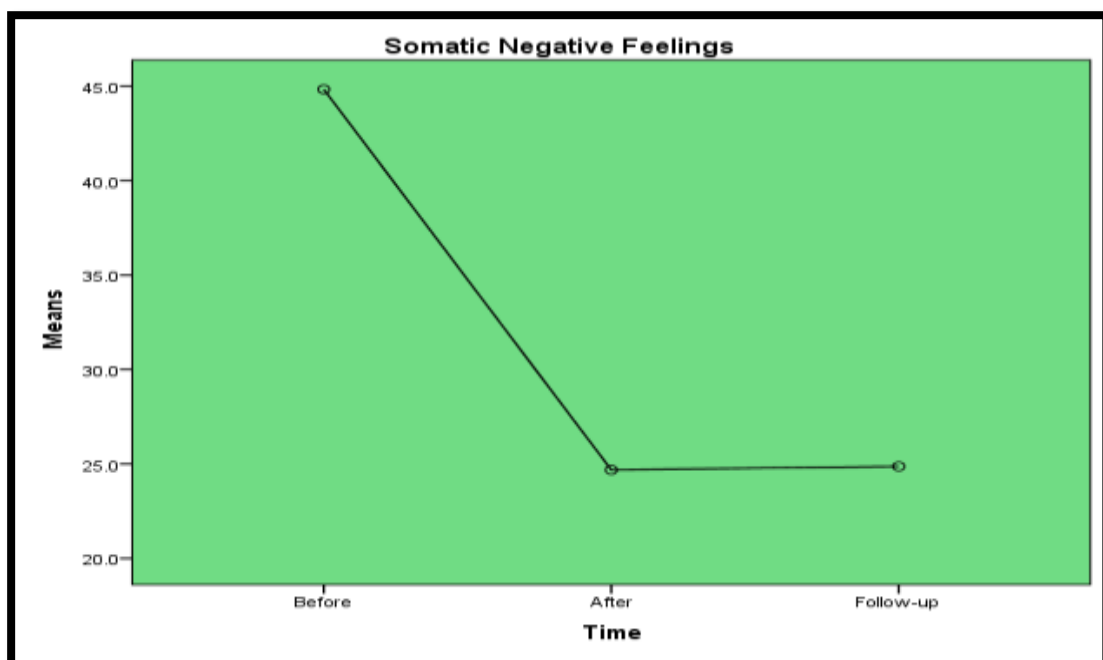


Figure 2

Figure 2 shows the comparison of Before, After and Follow-up Phases of Somatic Negative Feelings among College Students.

Table 8: Mean and Standard Deviation of Body Image among College Students in Before, After and Follow-up Phases of Intervention

Phases	Body Image		
	N	Mean	S.D.
Before	48	57.79	3.58
After	48	33.21	3.46
Follow-up	48	33.58	3.87

Table 8 represents the mean and standard deviation of body image before, after and follow-up phases among college students. The mean score for body image before intervention was 57.79 and it was reduced to 33.21 after intervention and follow-up phase was 33.58. Hence the reduction in the mean scores showed that the intervention was effective in reducing body image dissatisfaction among college students. The negative body image can affect both physical and mental health. Cognitive Behaviour Therapy model helps to identify the factors that precipitate body image concern such as distorted thinking and maladaptive behaviours like body checking, avoidance, social comparison. Cognitive Behaviour Therapy assessment and treatment like self monitoring plays a important role in managing the behaviours (Reas & Grilo, 2004).

Table 9 Repeated Measures ANOVA for Body Image Before, After and Follow-up Phases of Intervention of the College Students

N=48				
Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	19048.39	2	9524.19	782.39**
Greenhouse-Geisser	19048.39	1.88	10140.08	782.39**
Huynh-Feldt	19048.39	1.95	9748.20	782.39**
Lower-bound	19048.39	1.00	19048.40	782.39**

** = Significant at 0.01 level

Table 9 represents the results of Repeated Measures ANOVA for body image in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that there was a significant reduction in the

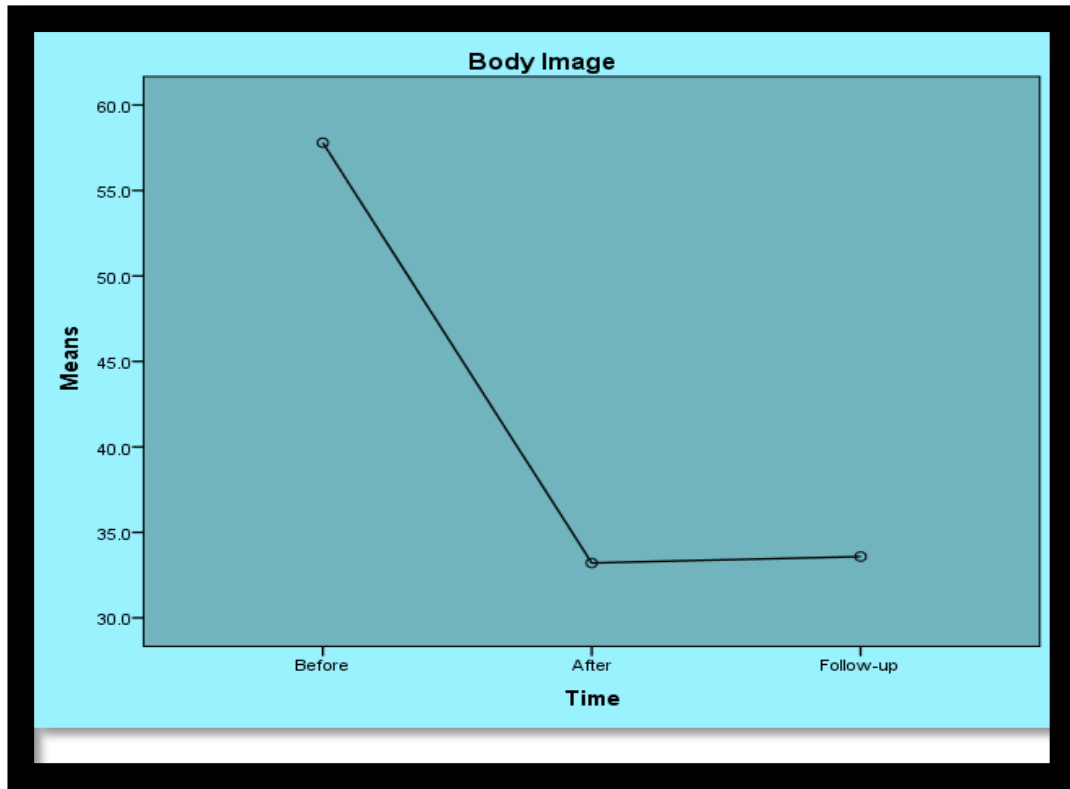


Figure 3

Figure 3 shows the comparison of Before, After and Follow-up Phases of Body Image among College Students.

Table 11: Mean and Standard Deviation of Somatic Nervousness participants in Before, After and Follow-up Phases of Intervention

Phases	Somatic Nervousness		
	N	Mean	S.D.
Before	48	45.12	3.63
After	48	24.71	3.13
Follow-up	48	26.54	3.94

Table 11 shows the mean and standard deviation of somatic nervousness among college students before, after and follow-up phases. The mean score for somatic

nervousness before intervention was 45.12, and it reduced to 24.71 after intervention phase. Hence, it is clear that the intervention was effective in the management of somatic nervousness problems among the college students. The research study done by Parihar et al. (2019) concluded that Positive body image was found to have strong protective effects against somatic complaints, social dysfunction, depression, and overall health. Positive body image is defined as having positive impressions, ideas, and decisions about one's entire body. Cognitions, affects and behaviours have a big impact on shaping life outcomes including health outcomes. The result implies that the intervention was significantly contributed to reduce the anxiety and nervousness among the college students.

Table 12 Repeated Measures ANOVA for Somatic Nervousness Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	12248.67	2	6124.33	601.76**
Greenhouse-Geisser	12248.67	1.99	6143.19	601.76**
Huynh-Feldt	12248.67	2.00	6124.33	601.76**
Lower-bound	12248.67	1.00	12248.67	601.76**

** = Significant at 0.01level

Table 12 demonstrates the results of Repeated Measures ANOVA for somatic nervousness before, after and follow-up phases of intervention among the college students and it clearly indicated significant differences. The results showed that when compared to before intervention score, there was a significant reduction in the level of somatic nervousness in after phase. Hadlandsmyth et al., (2017) investigated the correlation between multiple and somatic pain related psychological variables such as anxiety and depression in women. The pain severities, pain catastrophizing, fear of moments were related with relationship between both depression and anxiety which indicated that there was an underlying construct of general distress.

Table 13 Pairwise Comparisons for Before, After and Follow-up Phases in Somatic Nervousness among College Students

N= 48

	Phases	Mean Difference	Standard Error
Before	After	20.42*	0.63
	Follow-up	18.58*	0.66
After	Before	-20.42*	0.63
	Follow-up	-1.83*	0.66
Follow-up	Before	-18.58*	0.66
	After	1.83*	0.66

* = Significant at 0.05 level

Table 13 shows the pairwise comparison for somatic nervousness in before, after and follow-up phases. Based on the significant reduction in the level of somatic nervousness, Bonferroni post-hoc analysis was carried out to identify which particular differences between pairs of means are significant. The mean difference of before and after phases was 20.42, before and follow-up was 18.58 and after and follow-up was 1.83 which were statistically significant. Therefore it can be concluded that the administration of the intervention was effective in the management of somatic nervousness among college students. Some of the Cognitive Behaviour Therapeutic techniques like relaxation training, and biofeedback can help to gain more control over their stressful emotions. Cognitive Behaviour Therapy teaches Psychoeducation about Anxiety, skills for managing fear like relaxation, coping thoughts, problem solving and provides to encounter the fears and minimize avoidance (Kendall & Peterman, 2015). Hence the Alternative Hypothesis 4 **“There will be a significant difference between Before, After and Follow-up Phases in Somatic Nervousness through Intervention among the College Students”** is accepted.

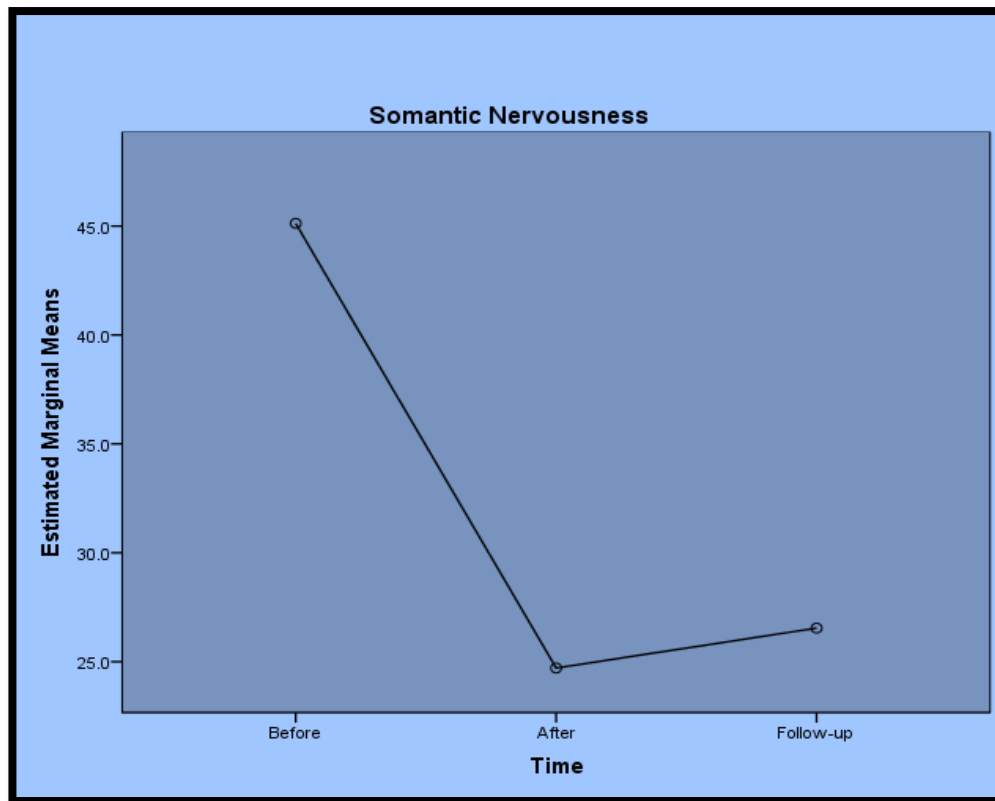


Figure 4

Figure 4 shows the comparison of Before, After and Follow-up Phases of Somatic Nervousness among College Students.

Table 14: Mean and Standard Deviation of Cognitive Distortions among College Students in Before, After and Follow-up Phases of Intervention

Phases	Cognitive Distortions		
	N	Mean	S.D.
Before	48	44.60	3.06
After	48	24.48	3.31
Follow-up	48	24.46	4.41

Table 14 displays the mean and standard deviation of cognitive distortions among college students before, after and follow-up phases. The mean score for cognitive distortions before intervention was 44.60, and it reduced to 24.48 after intervention and it

was further reduced to 24.46 in the follow-up phase. Cognitive Distortions are inaccurate thought patterns and it is also referred to as dysfunctional, negative or automatic thoughts. Cognitive Behaviour Therapy is the main component for recognizing, challenging and changing negative thoughts. Strachan and Cash (2002), evaluated the self help for a negative body image. They taught the participants how to recognise, monitor, and dispute faulty body image schemas, as well as how to rectify specific cognitive distortions about how they perceive and interpret appearance. Wertheim and Paxton (2012) explained some of the psychological and cognitive characteristics includes appearance related schemas, internalizing societal ideals and comparing one's own and others body image. Body dissatisfaction was found to be linked to cognitive schemas about appearance.

Table 15 Repeated Measures ANOVA for Cognitive Distortions Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	12973.93	2	6486.96	481.62**
Greenhouse-Geisser	12973.93	1.91	6777.72	481.62**
Huynh-Feldt	12973.93	1.99	6507.88	481.62**
Lower-bound	12973.93	1.00	12973.93	481.62**

** = Significant at 0.01 level

Table 15 shows the results of Repeated Measures ANOVA for cognitive distortions in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that there was a significant reduction in the level of cognitive distortion problems in after and follow-up phases. The Cognitive Behaviour Therapy based intervention was very effective in thought process. Bhattacharya, Chaudari, Saldanha and Menon (2013) analyzed the cognitive distortion leads to faulty emotions which in turn lead to maladaptive behaviour will have negative impact on cognitions. Cognitive Behaviour Therapy helped to bring about the changes in restructuring the cognitive thoughts, and trains in social and interpersonal skills.

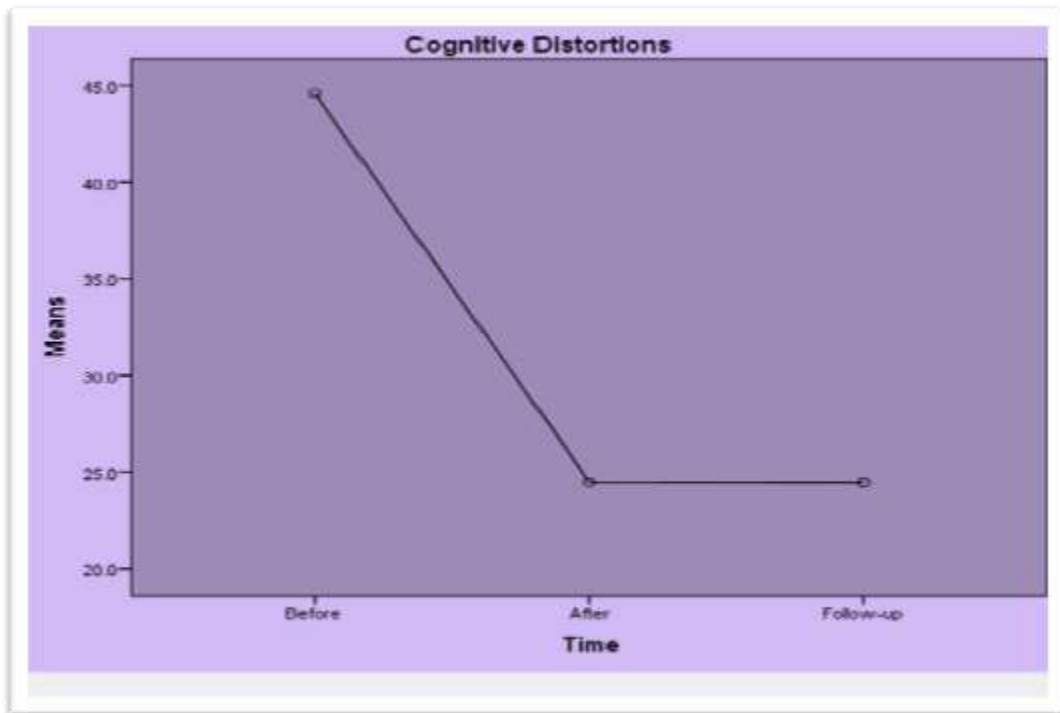


Figure 5

Figure 5 shows the comparison of Before, After and Follow-up Phases of Cognitive Distortions among College Students.

Table 17: Mean and Standard Deviation of Emotional Competence among College Students in Before, After and Follow-up Phases of Intervention

N=48

Variable	Before		After		Follow-up	
	Mean	S. D.	Mean	S. D.	Mean	S. D.
Adequate Depth of Feeling	9.62	1.18	22.85	1.57	21.96	1.87
Adequate Expressive and Control of Emotions	10.58	1.82	24.69	1.46	23.21	2.03
Ability to Function with Emotions.	10.54	1.98	25.77	1.52	24.37	2.00
Ability to Cope with Problem Emotions	10.13	1.36	24.54	1.38	23.42	1.58
Ability to Enhance Positive Emotions	10.12	1.67	25.56	1.46	24.38	1.98

Table 17 shows the mean and standard deviation of emotional competence among college students before, after and follow-up phases. The mean score for Adequate Depth of Feelings before intervention was 9.62, and it increased to 22.85 after intervention and 21.96 in the follow-up phase. Similarly, the mean score for Adequate Expressive and Control of Emotions before intervention was 10.58 and it further increased to 24.69 after intervention and 23.21 in the follow-up phase. Likewise, the mean score for Ability to Function with Emotions was 10.54 before intervention and it increased to 25.77 after intervention and 24.37 in the follow-up phase. Also, the mean score for Ability to Cope with Problem Emotions were 10.13, 24.54 and 23.42. Ability to Enhance Positive Emotions was 10.12, 25.56 and 24.38 respectively. Hence, it indicated that the intervention was effective in the management of emotions among the college students. Emotional Competence is an ability to express once emotions and inner feelings. It also helps to understand and interpret the emotion of others and as well as them (Bhat & Khan, 2018).

Table 18 Repeated Measures ANOVA for Adequate Depth of Feeling Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	5246.79	2	2623.40	1085.34**
Greenhouse- Geisser	5246.79	1.85	2832.07	1085.34**
Huynh- Feldt	5246.79	1.92	2725.05	1085.34**
Lower- bound	5246.79	1.00	5246.79	1085.34**

** = Significant at 0.01 level

Table 18 shows the results of Repeated Measures ANOVA for adequate depth of feeling in before, after and follow-up phases among the college students and it clearly indicates significant differences. Kamboj (2015) indicates the implication of the study was to realize the role of emotions and to make them emotionally competent through training.

Table 19 Pairwise Comparisons for Before, After and Follow-up Phases in Adequate Depth of Feeling among College Students

N= 48

Phases		Mean Difference	Standard Error
Before	After	-13.23*	0.28
	Follow-up	-12.33*	0.31
After	Before	13.23*	0.28
	Follow-up	0.90*	0.36
Follow-up	Before	12.33*	0.31
	After	0.90*	0.36

* = Significant at 0.05 level

Table 19 shows the pairwise comparison for adequate depth of feeling in before, after and follow-up phases. Bonferroni post-hoc analysis is to identify which particular differences between pairs of means are significant. The mean difference between before and after phases was 13.23, before and follow-up was 12.33 and after and follow-up was 0.90 which were statistically significant. Due to the administration of the intervention of emotion focused cognitive behavioural treatment had placed a stronger emphasis on understanding and regulation of emotion. The intervention and treatment programme mainly focused on emotion recognition, emotion expression and acceptance of emotion (Mathews, 2016). Hence the Alternative Hypothesis 6 **“There will be a significant difference between Before, After and Follow-up Phases in Adequate Depth of Feeling through Intervention among the College Students”** is accepted.

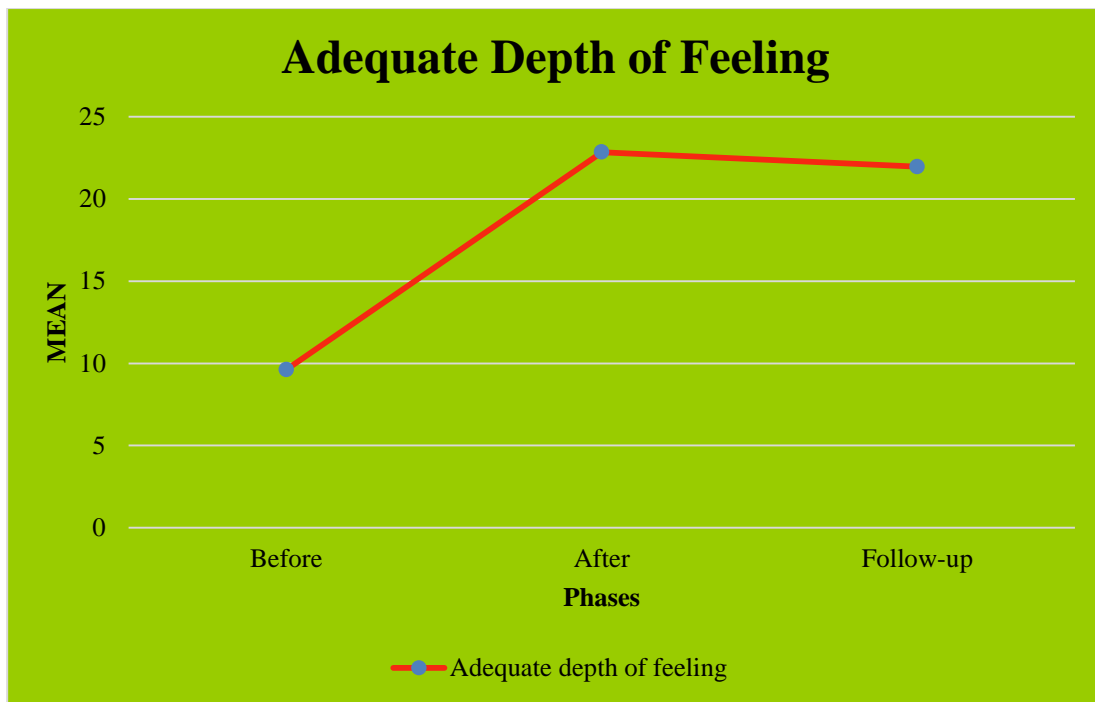


Figure 6

Figure 6 shows the comparison of Before, After and Follow-up Phases of Adequate Depth of Feeling among College Students.

Table 20 Repeated Measures ANOVA for Adequate Expressive and Control of Emotions Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	5768.10	2	2884.05	826.77**
Greenhouse-Geisser	5768.10	1.93	2989.93	826.77**
Huynh-Feldt	5768.10	2.00	2884.05	826.77**
Lower-bound	5768.10	1.00	5768.10	826.77**

** = Significant at 0.01 level

Table 20 shows the results of Repeated Measures ANOVA for adequate expressive and control of emotions in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to

before intervention scores, there was a significant increase in the level of expressive and emotional control in after and follow-up phases. Emotional suppression is a response oriented strategy that entails the active suppression of ongoing emotions. Cognitive reappraisal is a focused strategy and it is a form of cognitive change which involves constructing potential emotions (Brockman, 2016).

Table 21 Pairwise Comparisons for Before, After and Follow-up Phases in Adequate Expressive and Control of Emotions among College Students

N= 48

Phases		Mean Difference	Standard Error
Before	After	-14.10*	0.35
	Follow-up	-12.62*	0.41
After	Before	14.10*	0.35
	Follow-up	1.48*	0.38
Follow-up	Before	12.62*	0.41
	After	-1.48*	0.38

* = Significant at 0.05 level

Table 21 shows the pairwise comparison for adequate expressive and control of emotions in before, after and follow-up phases. By Bonferroni post-hoc analysis was carried out to identify which particular differences between pairs of means were significant. The mean difference of before and after phases was 14.10, before and follow-up was 12.62 and after and follow-up was 1.48 which were statistically significant. Emotional process includes difficulties in utilizing the emotion. Cognitive Behaviour Therapy may be enhanced in regulating the emotion (Bryant, 2013). Therefore it can be concluded that the administration of the intervention was effective in the management of adequate expressive and control of emotion among college students. Hence the Alternative Hypothesis 7 “**There will be a significant difference between Before, After and Follow-up Phases in Adequate Expressive and Control of Emotions through Intervention among the College students**” is accepted.

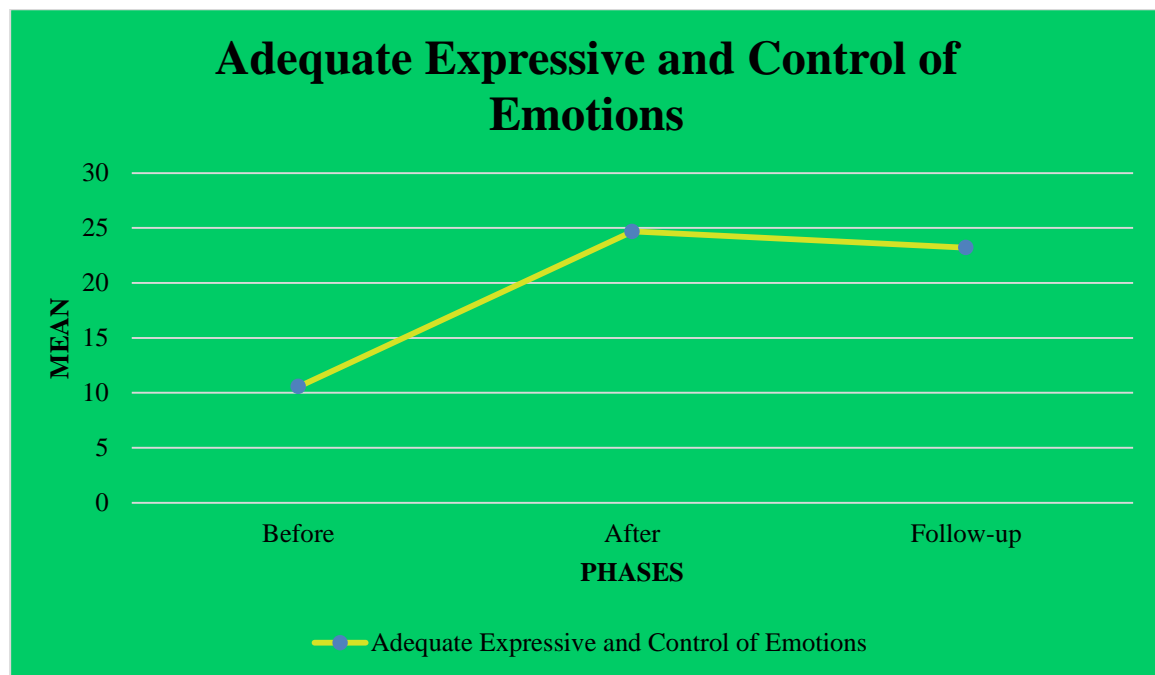


Figure 7

Figure 7 shows the comparison of Before, After and Follow-up phases of Adequate Expressive and Control of Emotions among College Students.

Table 22 Repeated Measures ANOVA for Ability to Function with Emotions Before, After and Follow-up Phases of Intervention of the College Students

N=48				
Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	6803.79	2	3401.90	1024.25**
Greenhouse-Geisser	6803.79	1.87	3639.49	1024.25**
Huynh-Feldt	6803.79	1.94	3499.93	1024.25**
Lower-Bound	6803.79	1.000	6803.79	1024.25**

** = Significant at 0.01 level

Table 22 shows the results of Repeated Measures ANOVA for ability to function with emotions in before, after and follow-up phases among the college students and it

clearly indicated significant differences. The results showed that when compared to before intervention scores, there was a significant reduction in the level of emotion to function with ability in after and follow-up phases. The emotional control and cognitive regulation helps to achieve the integration of emotional and cognitive regulation (Tyng, 2017).

Table 23 Pairwise Comparisons for Before, After and Follow-up Phases in Ability to Function with Emotions among College Students

N= 48

Phases		Mean Difference	Standard Error
Before	After	-15.23*	0.34
	Follow-up	-13.83*	0.42
After	Before	15.23*	0.34
	Follow-up	1.40*	0.35
Follow-up	Before	13.83*	0.42
	After	-1.40*	0.35

* = Significant at 0.05 level

Table 23 shows the pairwise comparison for the ability to function with emotions in before, after and follow-up phases. Bonferroni post-hoc analysis is to identify which particular differences between pairs of means are significant. The mean difference of before and after phases was 15.23, before and follow-up was 13.83 and after and follow-up was 1.40 which were statistically significant. In cognitive behavioural therapy, emotion stands with thought and behaviour as one of the interacting elements that make up a person's inner life (Tompkin, 2021). Therefore it can be concluded that the administration of the intervention was effective in the ability to function with emotion among college students. Hence the Alternative Hypothesis 8 **“There will be a significant difference between Before, After and Follow-up Phases in Ability to Function with Emotions among the College students”** is accepted.

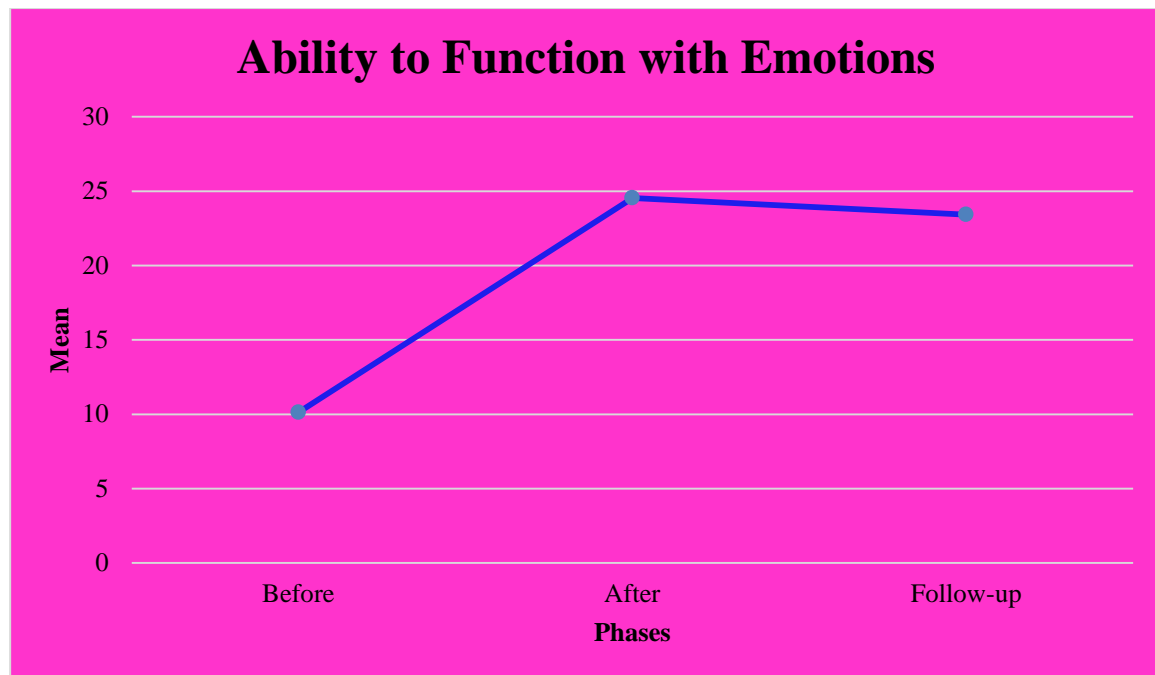


Figure 8

Figure 8 shows the comparison of Before, After and Follow-up Phases of Ability to Function with Emotion among College Students.

Table 24 Repeated Measures ANOVA for Ability to Cope with Problem Emotions Before, After and Follow- up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	6172.39	2	3086.19	1519.30**
Greenhouse-Geisser	6172.39	1.87	3306.75	1519.30**
Huynh-Feldt	6172.39	1.94	3180.25	1519.30**
Lower-bound	6172.39	1.00	6172.39	1519.30**

** = Significant at 0.01 level

Table 24 shows the results of Repeated Measures ANOVA for the ability to cope with problem emotions in before, after and follow-up phases among the college students and it clearly indicates significant differences. According to Ong and Thomspson (2018)

suggested that coping is connected with the experience of positive emotions, to reduce impact of negative emotions, and enabling adaptive outcomes in individuals. Managing the emotion is important for both cognitive and behavioural aspects.

Table 25 Pairwise Comparisons for Before, After and Follow-up Phases in Ability to Cope with Problem Emotions among College Students

N= 48

Phases		Mean Difference	Standard Error
Before	After	-14.42*	0.25
	Follow-up	-13.29*	0.30
After	Before	14.42*	0.25
	Follow-up	1.12*	0.32
Follow-up	Before	13.29*	0.30
	After	1.12*	0.32

* = Significant at 0.05 level

Table 25 shows the pairwise comparison for anxiety in before, after and follow-up phases. Based on the significant increase in the level of ability to cope with problem emotion, Bonferroni post-hoc analysis was carried out to identify which particular differences between pairs of means are significant. The mean difference between before and after phases was 14.42, before and follow-up was 13.29 and after and follow-up was 1.12 which were statistically significant. The cognitive efforts focused at seeking a solution to the problem comprehending its causes and accepting it is referred to as approach oriented coping. Active issue solving is associated with a high level of coping. (Gol & Cook, 2004). Therefore it can be concluded that the administration of the intervention was effective in the management of ability to cope with problem emotion among college students. Hence the Alternative Hypothesis 9 **“There will be a significant difference between Before, After and Follow-up Phases in Ability to Cope with Problem Emotions through Intervention among the College Students”** is accepted.

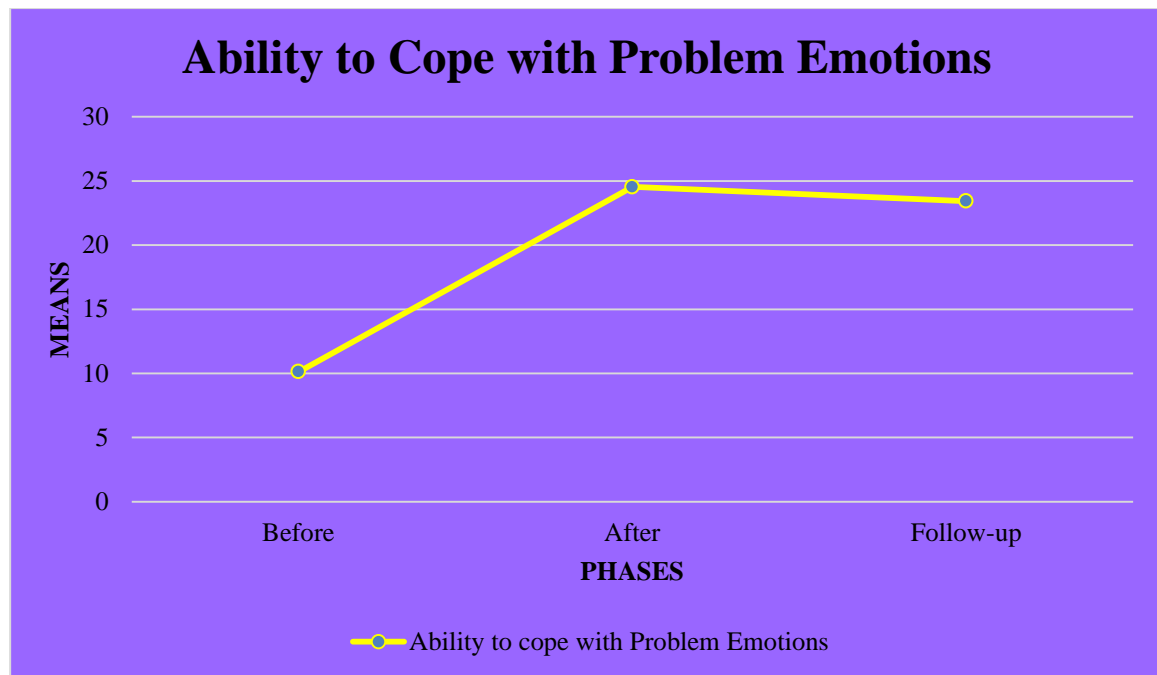


Figure 9

Figure 9 shows the comparison of Before, After and Follow-up Phases of Ability to Cope with Problem Emotions among College Students.

Table 26 Repeated Measures ANOVA for Ability to Enhance Positive Emotions Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	7084.62	2	3542.31	1076.29**
Greenhouse- Geisser	7084.62	1.91	3701.80	1076.29**
Huynh- Feldt	7084.62	1.99	3554.46	1076.29**
Lower- bound	7084.62	1.00	7084.62	1076.29**

** = Significant at 0.01 level

Table 26 shows the results of Repeated Measures ANOVA for ability to enhance positive emotions in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before

intervention scores, there was a significant reduction in the level of ability to enhance positive emotions in after and follow-up phases. Taylor's (2017) findings supported that positive emotions remained a robust predictor of change in symptoms. Positive emotions predict differential response to cognitive behaviour therapy.

Table 27 Pairwise Comparisons for Before, After and Follow-up Phases in Ability to Enhance Positive Emotions among College Students

N= 48

Phases		Mean Difference	Standard Error
Before	After	-15.44*	0.33
	Follow-up	-14.25*	0.39
After	Before	15.44*	0.33
	Follow-up	1.89*	0.39
Follow-up	Before	14.25*	0.39
	After	1.89*	0.39

* = Significant at 0.05 level

Table 27 shows the pairwise comparison for anxiety in before, after and follow-up phases. Bonferroni post-hoc analysis was carried out to identify which particular differences between pairs of means are significant. The mean difference of before and after phases was 15.44, before and follow-up was 14.25 and after and follow-up was 1.89 which were statistically significant. Positive emotional coping involves being kind and understanding to oneself as one tries to solve a problem on one's oneself and the use of cognitive transformations that enable the elicitation of positive emotions (Stanisławski, 2019). Therefore it can be concluded that the administration of the intervention was effective in the ability to enhance positive emotion among college students. Hence the Alternative Hypothesis 10 **“There will be significant difference between Before, After, Follow-up phases in Ability to Enhance Positive Emotion through Intervention among the College Students”** is accepted.

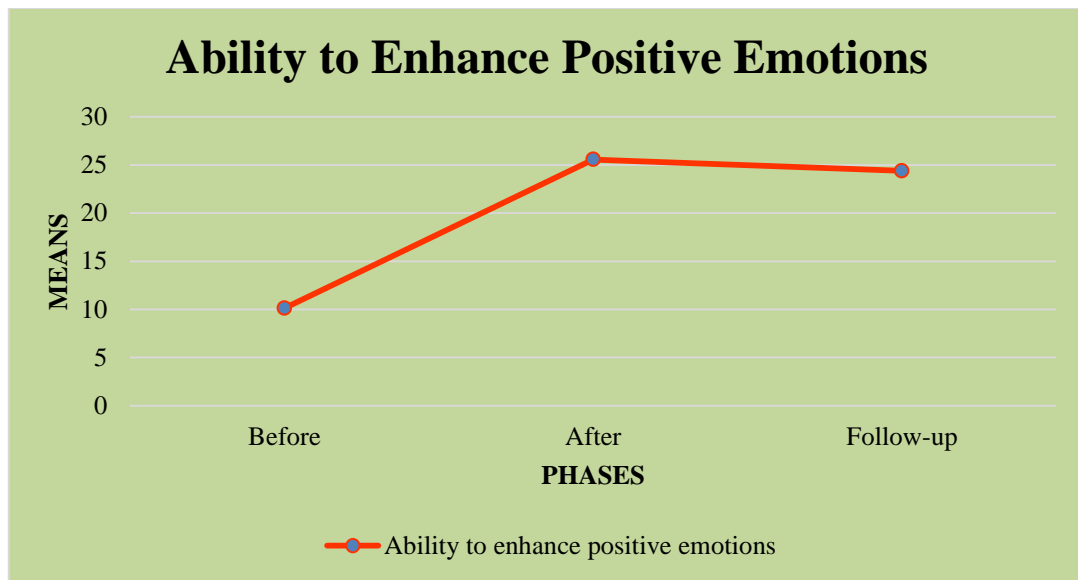
**Figure 10**

Figure 10 shows the comparison of Before, After and Follow-up Phases of Ability to Enhance Positive Emotions among College Students.

Table 28: Mean and Standard Deviation of Self Esteem among College Students in Before, After and Follow-up Phases of Intervention

N=48

Variable	Before		After		Follow-up	
	Mean	S. D.	Mean	S. D.	Mean	S. D.
Global Self Esteem	21.27	2.29	42.77	1.84	43.02	2.45
Competence	24.60	3.49	43.52	1.79	43.15	2.08
Lovability	22.96	2.83	44.77	1.53	44.66	1.97
Likability	25.00	2.43	41.58	1.60	41.90	1.78
Self Control	22.81	2.97	43.19	1.96	42.77	2.17
Personal Power	22.71	2.32	42.27	2.18	41.92	2.70
Moral Self approval	25.58	3.51	46.40	1.76	46.48	1.62
Body Appearance	19.10	1.99	40.73	1.94	41.17	2.25
Body Functioning	21.42	2.92	42.83	2.12	42.18	2.46
Identity Integration	20.94	2.63	42.46	1.65	42.50	2.01
Defensive Self Enhancement	33.69	2.59	58.46	3.45	58.27	3.72

Table 28 shows the mean and standard deviation of self esteem among college students in the before, after and follow-up phases. The mean score for Global Self Esteem before intervention was 21.27, and it increased to 42.77 after intervention and further increased to 43.02 in the follow-up phase; similarly for Competence were 24.60, 43.52 and 43.15. For Lovability were 22.96, 44.77 and 44.66. For Likability were 25.00, 41.58 and 41.90. For Self control were 22.81, 43.19 and 42.77. For Personal Power were 22.71, 42.27 and 41.92. Similarly, for Moral Self approval were 25.58, 46.40 and 46.48. Likewise, for Body Appearance were 19.10, 40.73 and 41.17. Also, for Body Functioning were 21.42, 42.83 and 42.18. Likewise, for Identity Integration were 20.94, 42.46 and 42.50. Also for Defensive Self enhancement were 33.69, 58.46 and 58.27 respectively. Hence, it is clear that the intervention was effective in improving the Self Esteem among the college students.

Table 29 Repeated Measures ANOVA for Global Self Esteem Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	14966.00	2	7483.00	1563.12**
Greenhouse-Geisser	14966.00	1.94	7721.91	1563.12**
Huynh-Feldt	14966.00	2.00	7483.00	1563.12**
Lower-bound	14966.00	1.00	14966.00	1563.12**

** = Significant at 0.01 level

Table 29 shows the results of Repeated Measures ANOVA for global self esteem in before, after and follow-up phases among the college students and it clearly indicates significant differences. In the level of global self esteem according to Knapen (2005) explained low self esteem is very much linked with psychological well being and mental illness. The improvement in self concept can lead to increase in global Self Esteem. Similarly increased in global self esteem helps in the reduction of depression and anxiety.

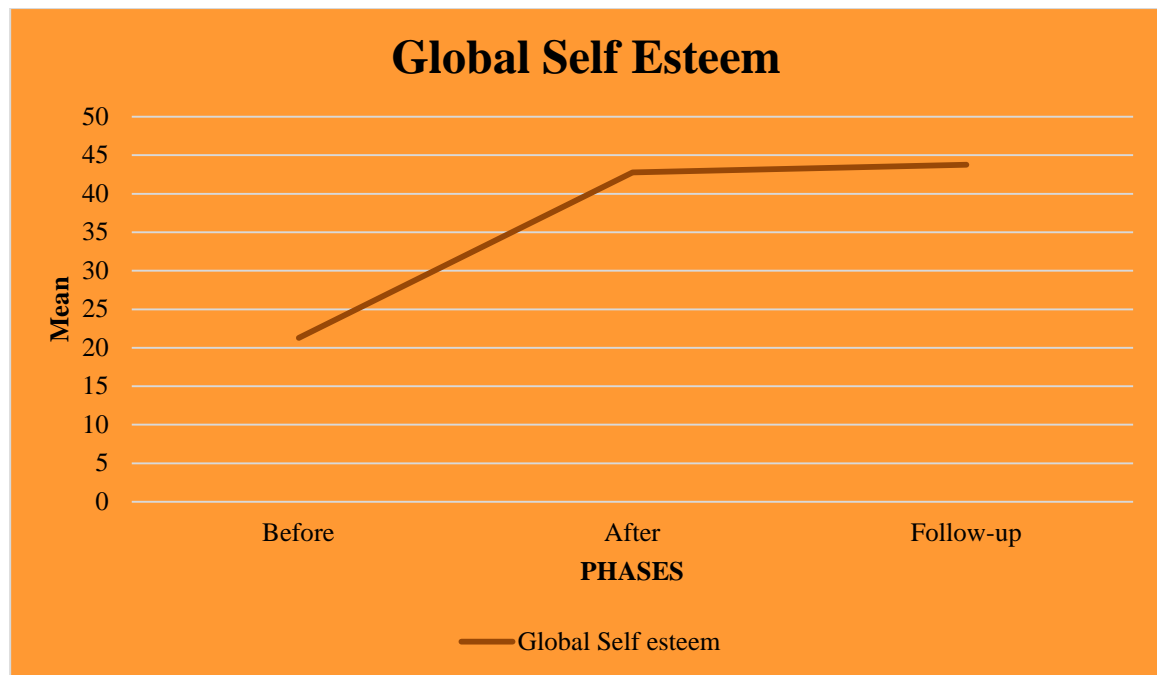


Figure 11

Figure 11 shows the comparison of Before, After and Follow-up Phases of Global Self Esteem among College Students.

Table 31 Repeated Measures ANOVA for Competence Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	11228.39	2	5614.19	1166.84**
Greenhouse-Geisser	11228.39	1.76	6361.71	1166.84**
Huynh-Feldt	11228.39	1.83	6140.20	1166.84**
Lower-bound	11228.39	1.00	11228.39	1166.84**

** = Significant at 0.01 level

Table 31 shows the results of Repeated Measures ANOVA for competence in before, after and follow-up phases among the college students and it clearly indicated significant differences. Due to intervention score, the feeling of efficacy that comes from

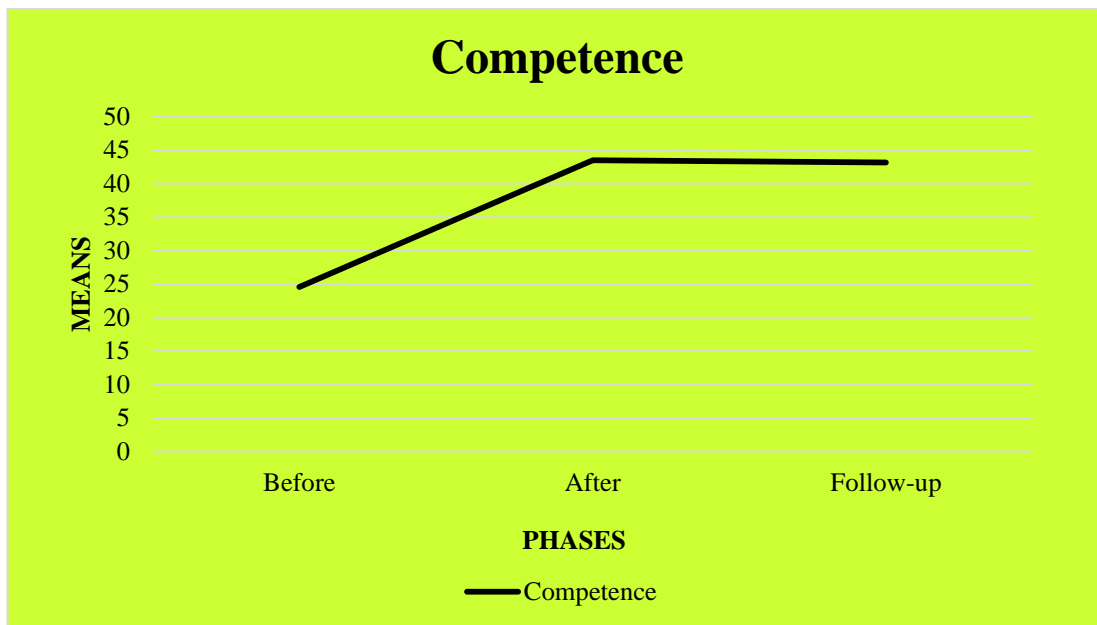


Figure 12

Figure 12 shows the comparison of Before, After and Follow-up Phases of Competence among College Students.

Table 33 Repeated Measures ANOVA for Lovability Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	15152.76	2	7576.19	1535.19**
Greenhouse-Geisser	15152.76	1.79	8477.58	1535.19**
Huynh-Feldt	15152.76	1.85	8175.87	1535.19**
Lower-bound	15152.76	1.00	15152.76	1535.19**

** = Significant at 0.01 level

Table 33 shows the results of Repeated Measures ANOVA for lovability in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention scores, there was a significant increase in the level of lovability in after and follow-up phases. Self

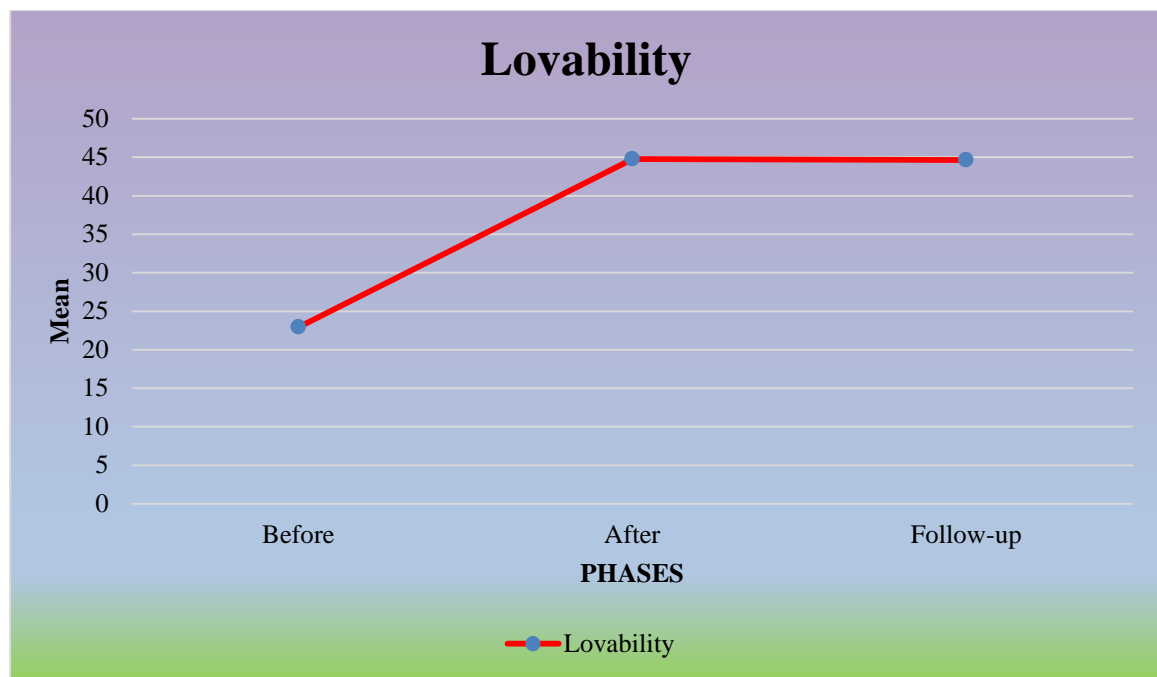


Figure 13

Figure 13 shows the comparison of Before, After and Follow-up Phases of Lovability among College Students.

Table 35 Repeated Measures ANOVA for Likability Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	8969.18	2	4484.59	1108.90**
Greenhouse-Geisser	8969.18	1.73	5176.40	1108.90**
Huynh-Feldt	8969.18	1.79	5001.98	1108.90**
Lower-bound	8969.18	1.00	8969.18	1108.90**

** = Significant at 0.01 level

Table 35 shows the results of Repeated Measures ANOVA for Likability in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention scores, there was a significant increase in the level of likability in after and follow-up phases. The

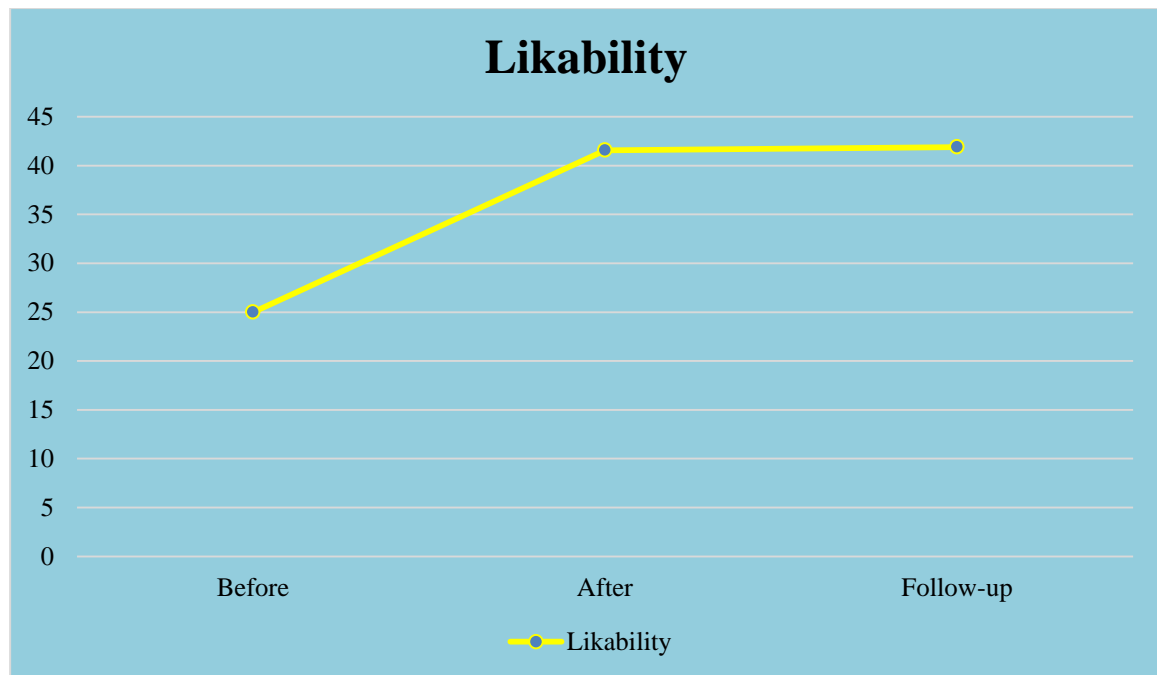


Figure 14

Figure 14 shows the comparison of Before, After and Follow-up Phases of Likability among College Students.

Table 37 Repeated Measures ANOVA for Self Control Before, After and Follow-up phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	13018.31	2	6509.19	1103.89**
Greenhouse-Geisser	13018.31	1.77	7347.85	1103.89**
Huynh-Feldt	13018.31	1.84	7090.30	1103.89**
Lower-bound	13018.31	1.00	13018.39	1103.89**

** = Significant at 0.01 level

Table 37 shows the results of Repeated Measures ANOVA for self control in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention

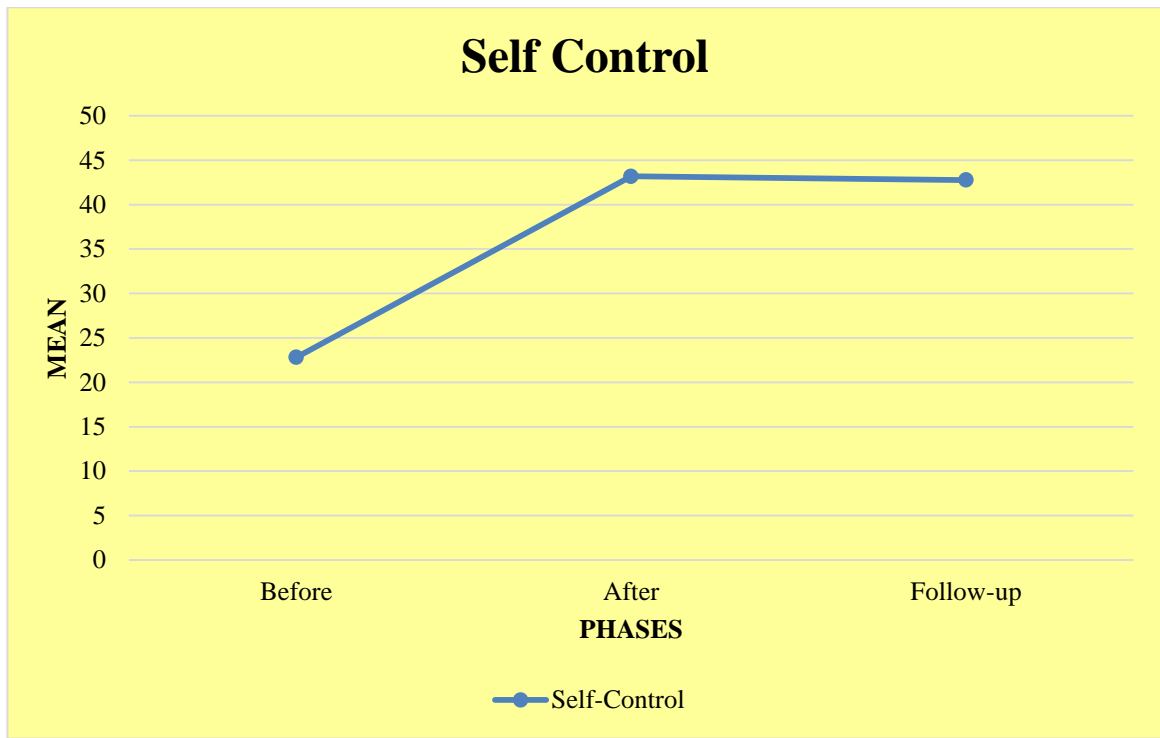


Figure 15

Figure 15 shows the comparison of Before, After and Follow-up Phases of Self Control among college Students.

Table 39 Repeated Measures ANOVA for Personal Power Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	12028.43	2	6014.21	1276.43**
Greenhouse-Geisser	12028.43	1.83	6573.62	1276.43**
Huynh-Feldt	12028.43	1.90	6330.22	1276.43**
Lower-bound	12028.43	1.00	12028.43	1276.43**

** = Significant at 0.01 level

Table 39 shows the results of Repeated Measures ANOVA for personal power in before, after and follow-up phases among the college students and it clearly indicates

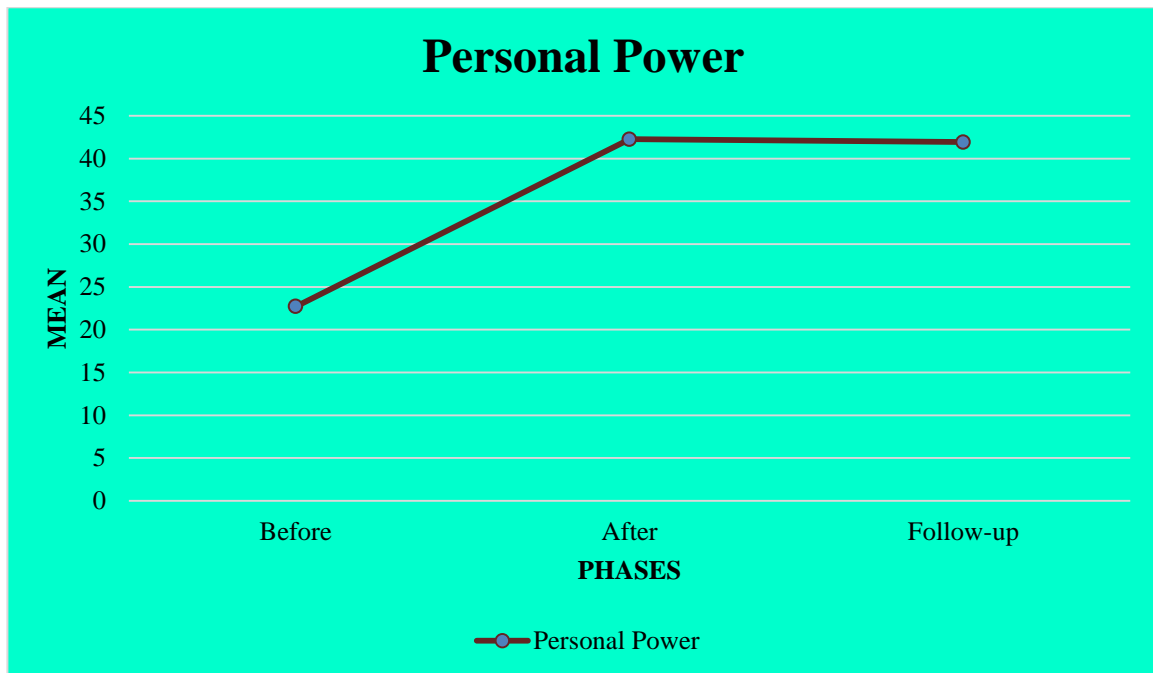


Figure 16

Figure 16 shows the comparison of Before, After and Follow-up Phases of Personal Power among College Students.

Table 41 Repeated Measures ANOVA for Moral Self Approval Before, After and Follow-up phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	13916.85	2	6958.42	1107.72**
Greenhouse-Geisser	13916.85	1.42	9787.60	1107.72**
Huynh-Feldt	13916.85	1.45	9574.32	1107.72**
Lower-bound	13916.85	1.00	13916.85	1107.72**

** = Significant at 0.01 level

Table 41 shows the results of Repeated Measures ANOVA for moral self approval in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention



Figure 17

Figure 17 shows the comparison of Before, After and Follow-up Phases of Moral Self Approval among College Students.

Table 43 Repeated Measures ANOVA for Body Appearance Before, After and Follow-up Phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	15142.17	2	7571.08	2184.19**
Greenhouse-Geisser	15142.17	1.82	8307.98	2184.19**
Huynh-Feldt	15142.17	1.89	8002.38	2184.19**
Lower-bound	15142.17	1.00	15142.17	2184.19**

** = Significant at 0.01 level

Table 43 shows the results of Repeated Measures ANOVA for body appearance in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention score, there was a significant increase in the level of body appearance in after and follow-

up phases. Low self esteem combined with unpleasant emotions can raise the chance of developing a distorted body image (Reboussin et al., 2000). Cognitive Behaviour Therapy had larger effects on body image by using the techniques like teaching, monitoring and restructuring of cognition (Alleva, 2015).

Table 44 Pairwise Comparisons for Before, After and Follow-up Phases in Body Appearance among College Students

N= 48

Phases		Mean Difference	Standard Error
Before	After	-21.54*	0.36
	Follow-up	-21.96*	0.43
After	Before	21.54*	0.36
	Follow-up	-0.42 NS	0.33
Follow-up	Before	21.96*	0.43
	After	0.42 NS	0.33

* = Significant at 0.05 level NS- Not Significant

Table 44 shows the pairwise comparison for body appearance in before, after and follow-up phases. Bonferroni post-hoc analysis was completed to identify which particular differences between pairs of means are significant. The mean difference of before and after phases was 21.54, before and follow-up was 25.96 which were statistically significant and after and follow-up was 0.42 which was statistically not significant. Low self esteem is frequently related to distorted body image (Goñi & Rodríguez, 2007). Cognitive Behaviour Therapy helps to challenge their maladaptive attitudes and beliefs on eating and body appearance and helps to overcome from it (Johansson, 2008). Therefore it can be concluded that the administration of the intervention was effective in the management of academic problems among college students. Hence the Alternative Hypothesis 18 “**There will be significant difference between Before, After and Follow-up Phases in Body Appearance through Intervention among the College Students**” is accepted.

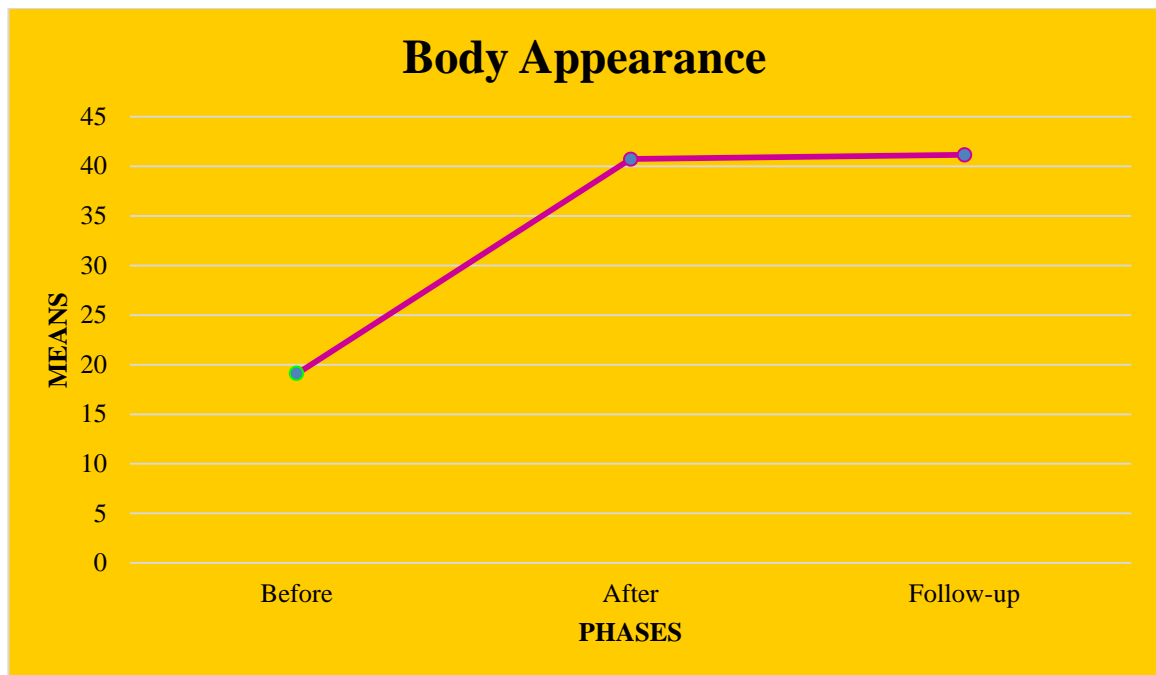


Figure 18

Figure 18 shows the comparison of Before, After and Follow-up phases of Body Appearance among College Students.

Table 45 Repeated Measures ANOVA for Body Functioning Before, After and Follow-up phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	14248.29	2	7124.15	1645.21**
Greenhouse-Geisser	14248.29	1.97	7225.97	1645.21**
Huynh-Feldt	14248.29	2.00	7124.15	1645.21**
Lower-bound	14248.29	1.00	14248.29	1645.21**

** = Significant at 0.01 level

Table 45 shows the results of Repeated Measures ANOVA for body functioning in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention scores, there was a significant increase in the level of body functioning in after and follow-

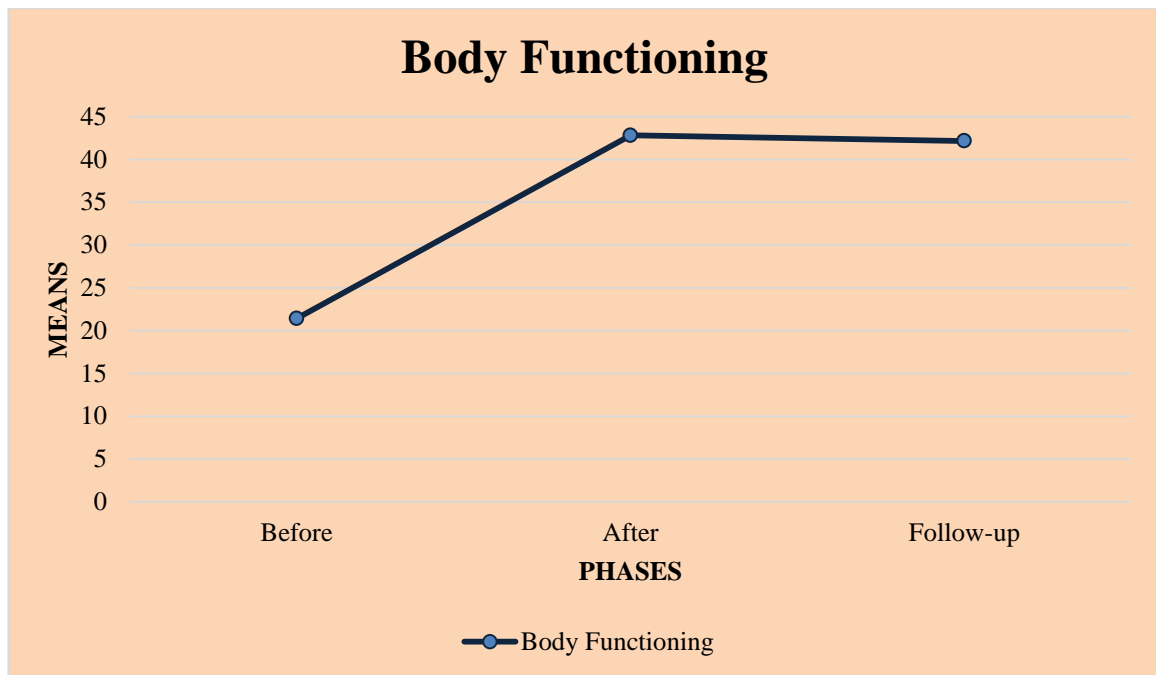


Figure 19

Figure 19 shows the comparison of Before, After and Follow-up phases of Body Functioning among College Students

Table 47 Repeated Measures ANOVA for Identity Integration Before, After and Follow-up phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	14849.43	2	7424.71	1659.47**
Greenhouse-Geisser	14849.43	1.77	8355.05	1659.47**
Huynh-Feldt	14849.43	1.84	8060.60	1659.47**
Lower-bound	14849.43	1.00	14849.43	1659.47**

** = Significant at 0.01 level

Table 47 shows the results of Repeated Measures ANOVA for identity integration in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention score, there was a significant increase in the level of identity integration in after and

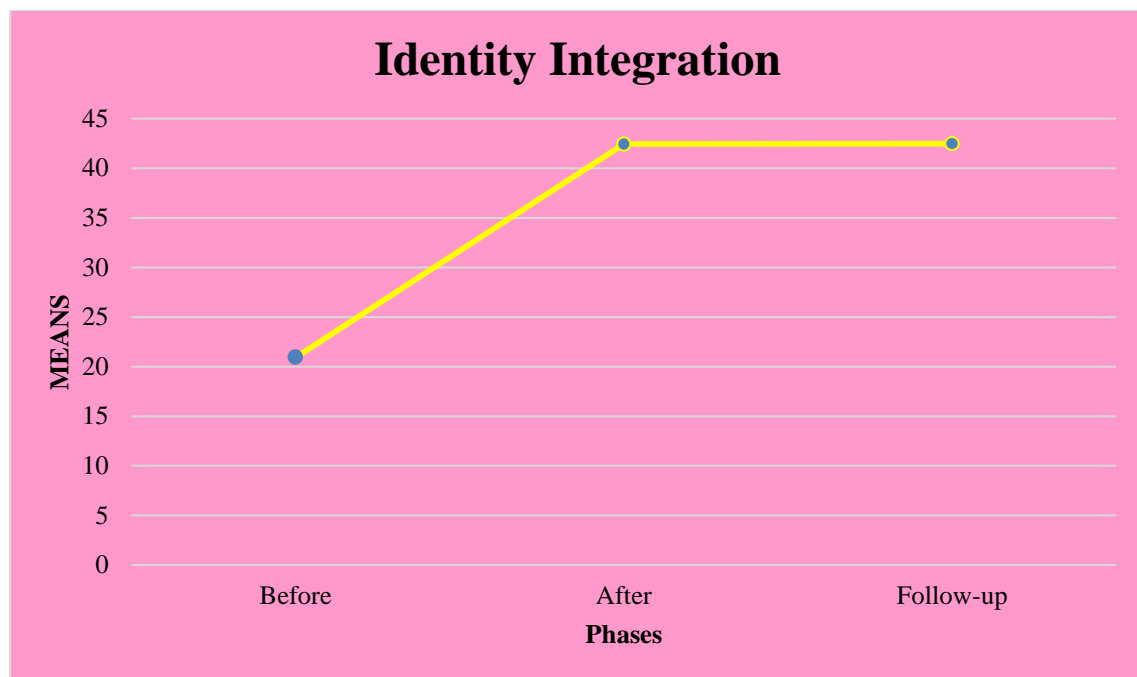


Figure 20

Figure 20 shows the comparison of Before, After and Follow-up phases of Identity Integration among College Students

Table 49 Repeated Measures ANOVA for Defensive Self Enhancement Before, After and Follow-up phases of Intervention of the College Students

N=48

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	19487.51	2	9743.76	1125.45**
Greenhouse-Geisser	19487.51	1.89	10287.67	1125.45**
Huynh-Feldt	19487.51	1.97	9884.78	1125.45**
Lower-bound	19487.51	1.00	19487.51	1125.45**

** = Significant at 0.01 level

Table 49 shows the results of Repeated Measures ANOVA for defensive self enhancement in before, after and follow-up phases among the college students and it clearly indicates significant differences. The results showed that when compared to before intervention scores, there was a significant increase in the level of defensive self-

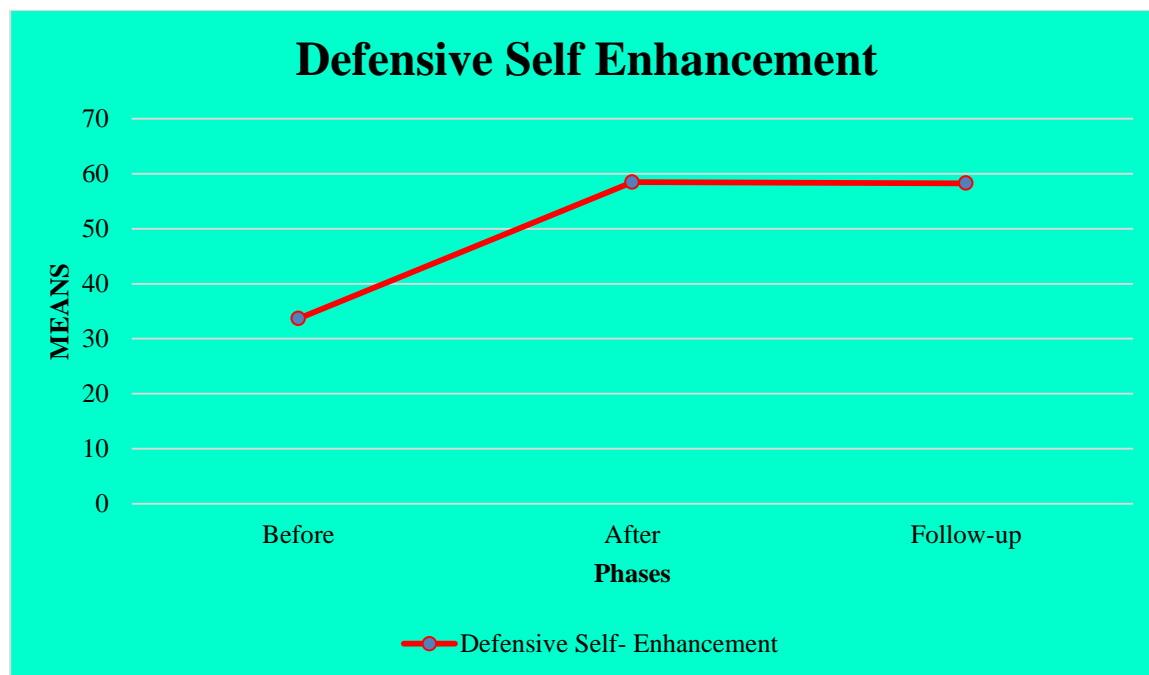


Figure 21

Figure 21 shows the comparison of Before, After and Follow-up phases of Defensive Self Enhancement among College Students.

On the whole, the research analysis shows the effectiveness of Cognitive Behaviour Therapy in managing body image, emotional competence and increasing the Self Esteem among college students was successful. The effectiveness of intervention in the management of perception about body image related problems has been found to have a positive effect among college students. Similarly, their problems related to emotional competence and Self Esteem also has the effect due to the intervention. Thus it is proved that the cognitive behaviour therapy will certainly help to overcome body image related problems and thus their overall physical, psychological, emotional and interpersonal functioning was improved.

The present study aimed at understanding the problems related to Body Image, Emotional Competence, and Self Esteem among college students and in testing the efficacy of Cognitive Behaviour Therapy. The intervention was effective in reducing the negative aspects of body image among the college students. Related to emotional competence the intervention was found to be effective in enhancing it. Similarly, the level of Self Esteem also increased due to the intervention.