

Chapter IV

Results and Discussion

**“Every nurse was drawn to nursing because of a desire to care, to serve, or to help”
- Christina Fiest-Heilmeier**

The present research is intended to explore the “**Management of Test Anxiety, Stress and Enhancing Achievement Motivation among Nursing Students through Cognitive Behaviour Therapy**”. The descriptive statistics include mean, standard deviation was computed. The results of Repeated Measures Analysis of Variance and Bonferroni Post-hoc Analysis were used to identify the effectiveness of cognitive behaviour therapy, and the results are presented in this chapter.

The sample consists of 52 nursing students from Baby Memorial College of Nursing, Kozhikode District, and Kerala. The inclusion criteria consisted of nursing students who had scored high in test anxiety, stress and low in achievement motivation. Participants who have consented and are willing to participate were taken into the study. The student’s were chosen using the purposive sampling method. Fifty-two nursing students were selected and taken into the study. Cognitive Behaviour Therapy was administered to fifty-two nursing students. For clear understanding, this chapter has been divided into four sections.

Section I deals with the demographic details of the nursing students and its characteristics are given in frequencies and percentages.

Section II represents the results of levels, descriptive statistics, Repeated Measures ANOVA, and Bonferroni Post-hoc analysis of nursing students during before, after and follow-up phases of Cognitive Behaviour Therapy in test anxiety.

Section III presents the results of descriptive statistics, Repeated Measures ANOVA, and Bonferroni Post-hoc analysis of nursing students during before, after and follow-up phases of Cognitive Behaviour Therapy in stress. The sub scales of stress are

- (i) Financial
- (ii) Family
- (iii) Social

- (iv) Education
- (v) Ego thread
- (vi) Bereavement
- (vii) Separation
- (viii) Personal Setback
- (ix) Health of Others
- (x) Stress

Section IV represents the results of levels, descriptive statistics, Repeated Measures ANOVA, and Bonferroni Post-hoc analysis of nursing students during before, after and follow-up phases of Cognitive Behaviour Therapy in enhancing achievement motivation.

SECTION I

Demographic details of the Nursing Students

The Demographic details of the nursing students were assessed are presented in the following table.

Table 4

Demographic details of the nursing students

N=52

Demographic Details	Options	Frequency	Per-cent
Age	18	38	36
	19	26	27
	20	15	15
	21	8	8
	22	6	6
	23	7	8
Gender	Female	52	100
	Rs. 10,000 – 20,000	40	76
Socio-economic Status	Rs. 21,000 – 30,000	6	12
	Rs. 31,000 – 40,000	5	10
	Rs. 41,000 – 65,000	1	2
Residence	Rural	32	62
	Urban	20	38

Table 4 illustrates the demographic details of the nursing students consisting of 52 students from Baby Memorial College of Nursing, Kozhikode District, Kerala, who were selected for the study with 36% of the students belongs to the age range of 18 years, 27% were in the age group of 17 years, 15% of the nursing students were in the age of 20 years, 8% of the students were in the age range of 21 years, 6 % of the students were in the age range if 22 years, and finally 8% of the nursing students belongs to the age range of 23 years. Of the students all 100% of the nursing students were female participants who actively participated throughout the study.

The social-economic status of the nursing students states that a majority of 76% the nursing students falls under the income of Rs. 10,000/- to Rs. 20,000/-. 12% of the students falls under the category of family earning Rs. 21,000/- to Rs. 30,000/-, Ten percent of the nursing students were from the family income of Rs. 31,000/- toRs. 40,000/- , and finally 2% of the nursing students belongs to the family income of Rs. 41,000/- to Rs. 65,000/- as their monthly family income.

Majority of the nursing students were from rural area with 62%, whereas only 38% of the students belong to urban area.

SECTION II

Test Anxiety

Table 5

Level of Test Anxiety among Nursing Students

N=150

Test Anxiety	Frequency	Percentage
Low Test Anxiety	2	1
Normal Test Anxiety	96	64
High Test Anxiety	46	31
Extremely High Test Anxiety	6	4

The table 5 depicts the levels of test anxiety among nursing students. From this table it is evident that 4% of the students faces extremely high level of test anxiety, followed by 31% of the students experiences high level of test anxiety. However, 64% of the nursing student's experiences normal level of test anxiety which is essential to take-up the exams and approach them into a positive manner. Finally, only 1% of the students

experience low level of test anxiety. The students who have secured high and extremely high test anxiety were taken into cognitive behaviour therapy and they were reassessed using the same set of psychological questionnaires after completion of the intervention therapy.

Figure 12

Level of Test Anxiety among Nursing Students

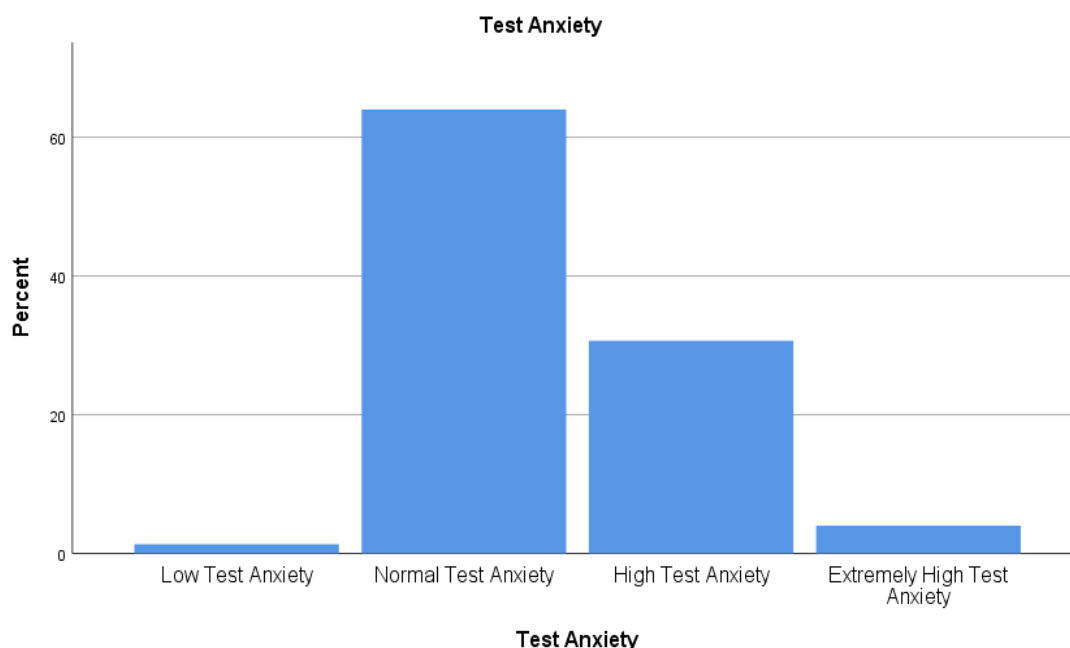


Table 6

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behaviour Therapy in Test Anxiety

Variable	Groups	Phases	Mean	SD	N
Test Anxiety	Nursing Students	Before	85.52	5.22	52
		After	73.87	2.13	52
		Follow-up	70.29	1.45	52

Table 6 shows the descriptive statistics of test anxiety of nursing students. The mean score and standard deviation of test anxiety among nursing students in before CBT program was recorded as 85.52 and 5.22 respectively, after CBT programme, the mean score was recorded as 73.87 with the standard deviation score of 2.13 respectively, and in follow-up phase of CBT programme, the scores of mean and standard deviations was

70.29 and 1.45. From the inferred results it is evident that test anxiety has been reduced gradually following various methods taught during CBT intervention programme.

The students were taught to read and learn mindfully, in order to practice better learning experiences which helps them to reduce the anxiety levels especially during semesters examination. The students were exposed to minor level of tests on a regular basis to give more exposure towards facing multiple tests so that which helps them to reduce the test anxiety in various aspects.

Cognitive Behaviour Therapy (CBT) was found to be efficacious along acceptance and commitment therapy (ACT) in reducing test anxiety, general anxiety and rumination of the students (Uysal et al., 2023). Njidekaand Ezeugo (2023), has inferred that CBT was found to be effective in reducing test anxiety among secondary school students.

Table 7

Repeated Measures ANOVA during before, after, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Test Anxiety

N=52

Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	6596.77	2	3298.39	412.01
Greenhouse-Geisser	6596.77	1.19	5507.88	412.01
Huynh-Feldt	6596.77	1.21	5450.12	412.01
Lower-bound	6596.77	1.00	6596.77	412.01

** Significant at 0.01 level

Table 7 represents the results of Repeated Measures ANOVA in test anxiety of nursing students and it clearly specifies that there was a significant difference between before, after and follow-up phases of Cognitive Behaviour Therapy programme. The result showed that the compared to before scores, there was a significant reduction in the level of test anxiety in after Cognitive Behaviour Therapy programme. The students were taught a technique known as auto suggestion. With the help of continuous practice of auto-suggestion and journaling practice, they become highly familiar with the test aspects and

gradually reduced the level of exhibiting test anxiety. Thus, it helped the students to improve their academic marks, also it improved their performance.

Greve, (2023) shown that the techniques such as coping self-talk, expressive writing, cognitive behaviour therapy, and improved classroom test performance and ACT has reduced the level of test anxiety. As the high grades and professional degrees feed even more test anxiety and thus, CBT plays a key role in reducing the test anxiety and improved performance among students (Jerrim, 2022).

Table 8

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Test Anxiety

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Test Anxiety	Nursing Students	Before	After	11.65*	.000
			Follow-up	15.23*	.000
		After	Before	-11.65*	.000
			Follow-up	3.57*	.000
		Follow-up	Before	-15.23*	.000
			After	-3.57*	.000

*Significant at 0.05 level

Table 8 shows the result of Post-hoc Analysis in Test anxiety of nursing students. Bonferroni Post-hoc Analysis proved that test anxiety reduced significantly when compared to before and after phases of Cognitive Behaviour Therapy programme. It clearly indicates that there was a high mean difference between before and after Cognitive Behaviour Therapy programme was 11.65, and before and follow-up phases of the programme was 15.23 which were statistically significant and the mean differences between after and follow-up phases was 3.57 which was statistically not significant. Thus, the effect of Cognitive Behaviour Therapy had a greater impact in managing test anxiety, but did not further improve in follow-up phase, but it sustained. CBT helps to improve cognitive adaptability which results in positive outcomes among the students.

The techniques such as cognitive rehearsal, and self-monitoring were found to be more efficacious in dealing with test anxiety. Text anxiety has been reduced eventually when they tried implementing the learnt techniques in efficient manner. Thus, students reported that along with other techniques, relaxation therapy was highly effective in reducing test anxiety at the current moment of anxiety.

Hence the Alternative Hypothesis 1, “There will be a significant reduction in Test Anxiety among Nursing Students in Before, After and Follow-up without control group through Cognitive behaviour Therapy”, is accepted.

Figure13

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Test Anxiety

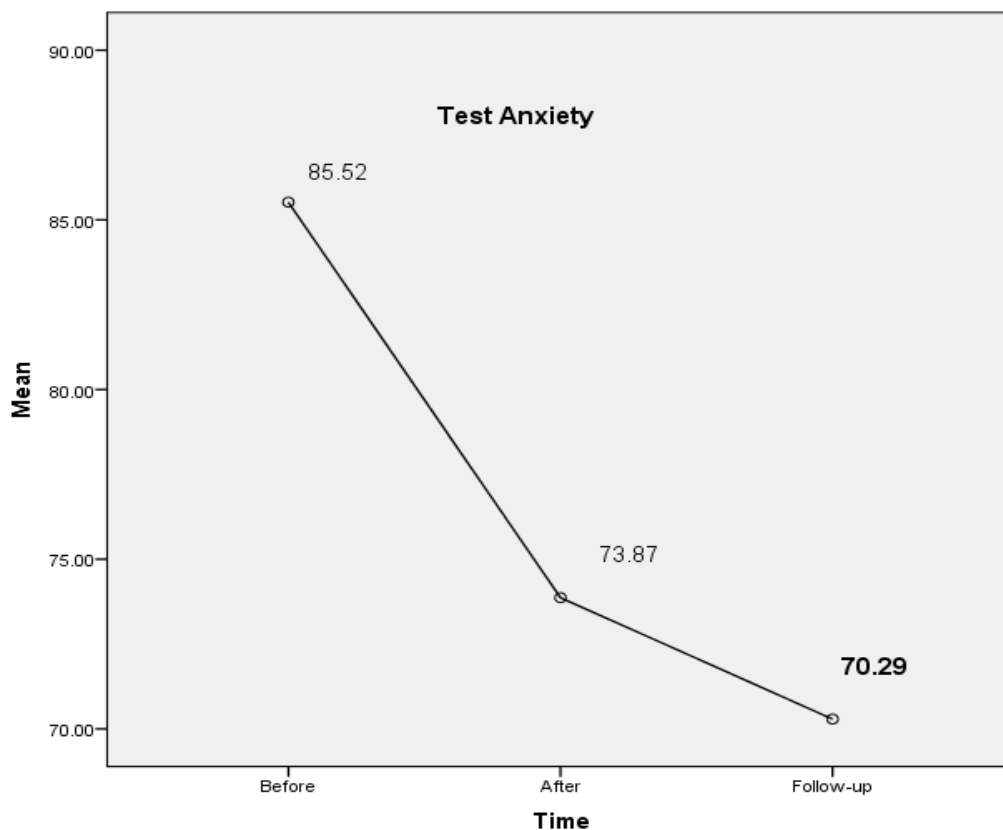


Figure 12 shows the before, after, and follow-up test phases of nursing students in test anxiety. The graph shows a drastic reduction in the level of test anxiety in the group after therapy. The follow-up data shows a slight decrease in the test anxiety level in the

Follow-up phase of the group. By using a very simple method of mindful reading, self-monitoring, thought-stopping techniques, was found to be effective in handling test anxiety had enthroned a light on nursing students.

SECTION II

(i) Financial Stress

The results of levels descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students during before, after and follow-up phases of Cognitive Behaviour Therapy in Financial Stress.

Table 9

Level of Financial Stress among Nursing Students

N=150

Financial Stress	Frequency	Percentage
Very High	1	1
High	27	18
Above Average	51	34
Average	31	21
Below Average	35	23
Low	5	3

The above table shows the first sub-scale of student stress scale namely financial stress. In this table 9, the level of financial stress was depicted and it is understood that only 1% of the student experiences very high level of financial stress, 18% of the students go through high level of financial stress. The reason could be the student's familial background. A total of 34% of students falls under average level of financial stress, 21% of student's experiences below average and only 3% of the students experiences low level of financial stress.

Figure 14

Level of Financial Stress among Nursing Students

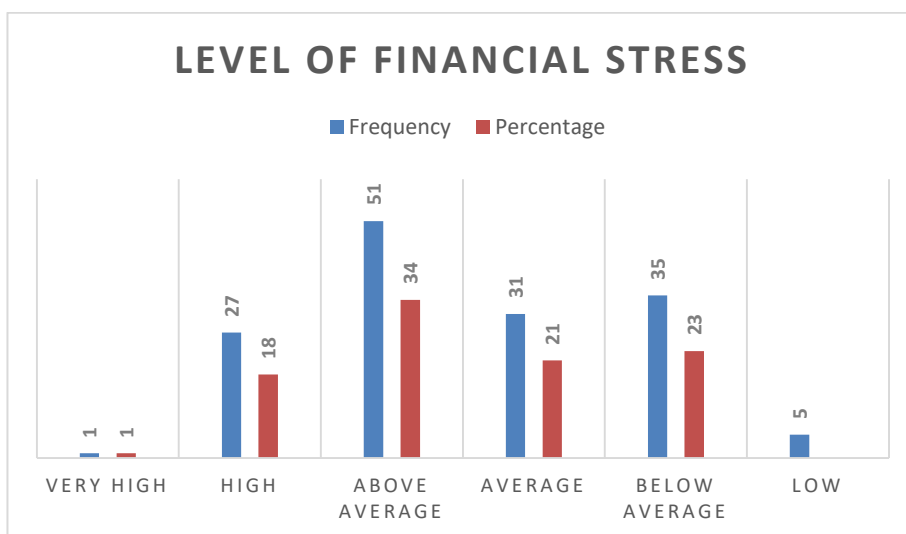


Table 10

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Financial Stress

Variable	Groups	Phases	Mean	SD	N
Financial Stress	Nursing Students	Before	22.15	4.31	52
		After	16.42	4.07	52
		Follow-up	13.42	3.89	52

Table 10 shows the descriptive statistics of financial stress of nursing students. The mean score and standard deviation of test anxiety among nursing students in before CBT program was recorded as 22.15 and 4.31 respectively, after CBT programme, the mean score was recorded as 16.42 with the standard deviation score of 4.07 respectively, and in follow-up phase of CBT programme, the scores of mean and standard deviations was 13.42 and 3.89. From the inferred results it is evident that test anxiety has been reduced gradually following various methods taught during CBT intervention programme.

The students reported that the technique of identifying the actual threatening/worrying event which occurs completely due to student error the situations which is beyond their limit. The financial stress is one such area, where as regular nursing students their only job is to study and commit to their training sessions. Whereas, the

money aspects would be taken care of their family, therefore the students were asked to show their thankfulness in the aspects of scoring higher academic performance and excellent knowledge and practicing more of training skills. This method help the students to become even more aware of being emotional aspects.

Table 11

Repeated Measures ANOVA during before, after, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Financial Stress

N=52

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	2046.513	2	1023.256	238.936**
Greenhouse-Geisser	2046.513	1.406	1455.060	238.936**
Huynh-Feldt	2046.513	1.434	1426.738	238.936**
Lower-bound	2046.513	1.000	2046.513	238.936**

** - Significant at 0.01 level

Repeated measures ANOVA were performed to compare the effect of CBT intervention programme on reaction time of before, after and follow-up phases were presented in the above table 11. The table shows us a clear picture that there was a statistically significant difference in the before, after and follow-up phases. A study done by Santos (2020), nursing students in South Korea were taken into study to understand the nursing human shortages and how the pandemic COVID-19 has its impact on before and after consequences. Although the students initially decided to continue with the nursing programme but soon after the pandemic the students decided to quit the study in consideration between financial factor and personal sacrifice. Whereas, as study conducted by Weiner et al., (2020), dealt with online CBT was conducted among healthcare workers especially nursing students in-order to reduce depression, sleep disorders, and post-traumatic stress disorder (PTSD) was taken into considerations. Healthcare professionals who were exposed to online CBT programme proved to be effective in treating and preventing number of stress-related disorders. Thus, Cognitive Behaviour Therapy was found to be highly useful in treating people who experiences stress and creating a hotline

link to deal with such psychological stress would play a key role in dealing with the aspects of stress-related disorders. Henceforth, the result showed that the before, after and follow-up scores were significant in reducing the level of financial stress among nursing students.

Table 12

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Financial Stress

N=52					
Measure	Group	Phases	Phases	Mean Difference	Sig.
Financial Stress	Nursing Students	Before	After	5.73*	.000
			Follow-up	8.73*	.000
		After	Before	-5.73*	.000
			Follow-up	3.00*	.000
		Follow-up	Before	-8.73*	.000
			After	-3.00*	.000

*-Significant at 0.05 level

Table 12 shows the result of Post-hoc Analysis in financial stress of nursing students. Bonferroni Post-hoc Analysis proved that financial stress reduced significantly when compared to before and after phases of Cognitive Behaviour Therapy programme. It clearly indicates that there was a high mean difference between before and after Cognitive Behaviour Therapy programme was 5.73, and before and follow-up phases of the programme was 8.73 which were statistically significant and the mean differences between after and follow-up phases was 3.00 which was statistically significant. Thus, the effect of Cognitive Behaviour Therapy had a greater impact in managing financial stress, also the intervention techniques was highly sustained even in the follow-up explaining that the nursing students were highly consistent in following the techniques taught during the programme. CBT helps to improve cognitive adaptability which results in positive outcomes among the students.

Hence the Alternative Hypothesis 2.1, “There will be a significant reduction in financial stress among Nursing Students in Before, After and Follow-up without control group through Cognitive behaviour Therapy”, is accepted.

Figure 15

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Financial Stress



Figure 15 shows the before, after, and follow-up test phases of nursing students in financial stress. The graph shows a drastic reduction in the level of financial stress in the group after therapy. The follow-up data shows a slight decrease in the financial stress level in the Follow-up phase of the group.

(ii) Family Stress

The results of levels descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in *family* stress.

Table 13

Level of Family Stress among Nursing Students

<i>N=150</i>		
Family Stress	Frequency	Percentage
Very High	79	53
High	18	12
Above Average	17	11
Average	4	3
Below Average	27	18
Low	5	3

The above table shows the second sub-scale of student stress scale namely family stress. In this table 13, the level of family stress was depicted and it is understood that 53% of the student experiences very high level of family stress, 12% of the students go through high level of family stress. The students who fall under above average level of family stress were 11% and 3% of students scored average level of family stress. Eighteen per cent of the nursing students have scored as below average and only 3% of the student's falls under low level of family stress. The reason behind very high level of family stress may be the fact that the students were residing in institution and/or private hostel for their education purpose leaving their family and stay away from them. This contributes as the high level of family stress among the students.

Figure 16

Level of Family Stress among Nursing Students

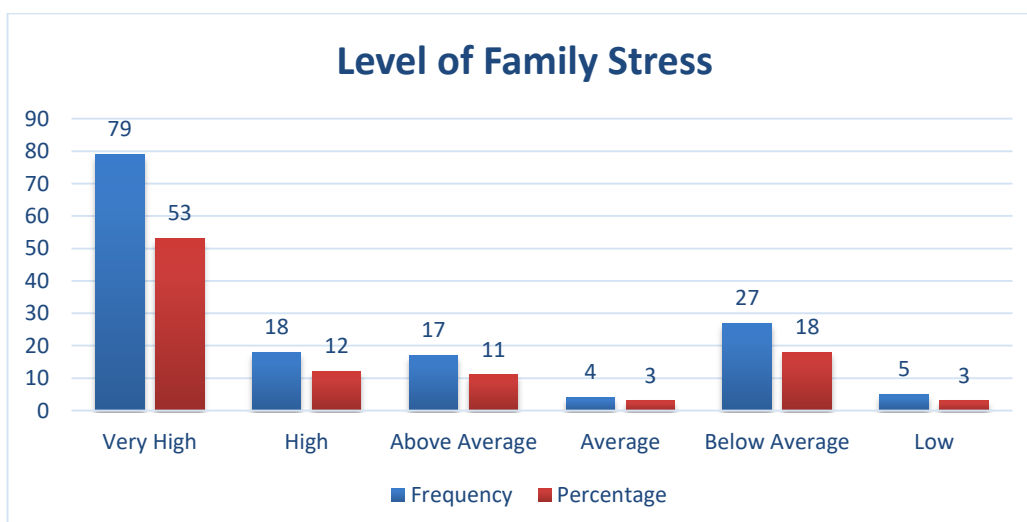


Table 14

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Family Stress

Variable	Groups	Phases	Mean	SD	N
Family Stress	Nursing Students	Before	35.09	6.83	52
		After	26.15	5.69	52
		Follow-up	21.00	5.23	52

The descriptive statistics of family stress of nursing students are in table 14. The mean score and standard deviation of family stress of nursing students before therapy were 35.09 and SD= 6.83, after Cognitive Behaviour Therapy program the mean score obtained was 26.15 and the standard deviation score was 5.69 and the follow-up phase of the program the mean and standard deviation scores were recorded as 21.00 and 5.23 respectively showing a change from before Cognitive Behaviour Therapy program to follow-up phase. The results showed a remarkable reduction in family stress when compared to before and after phase among the nursing students. In the follow-up phase the same level was maintained. There was a considerable decrease in family stress in all three phases of the therapy

Family stress occurs due to staying away from the family. Majority of the students were brought-up along with their parents until completing their higher education, soon after their school studies the students were put under different educational institutions for betterment of the degree conveniences. Therefore, to adapt to the hostel, nursing college, training timings, hospital postings, the students find it highly difficult to find comfort in it. It makes them feel and get overtly stressed thinking about their family. Hence, the students were taught to set a clear goal and the purpose of studying in the college. Once the purpose of their education is being clearly routed then the nursing students gained a lot more confidence in continuing with their studies rather than worrying about their family.

Table 15

Repeated Measures ANOVA during Before, After, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Family Stress

N=52

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	5290.628	2	2645.314	181.571**
Greenhouse-Geisser	5290.628	1.281	4131.505	181.571**
Huynh-Feldt	5290.628	1.299	4072.631	181.571**
Lower-bound	5290.628	1.000	5290.628	181.571**

** Significant at 0.01 level

Table 15 reveals the results of Repeated Measures ANOVA for family stress before, after and follow-up phases of Cognitive Behaviour Therapy and it clearly indicated significant differences. The results showed that when compared to before therapy score, there was a significant reduction in the level of family stressing after phase. There was a statistically significant differences were observed after Cognitive Behaviour Therapy program. Thus, Cognitive Behaviour Therapy was found to be effective in reducing family stress among nursing students.

A study done by Ernst, O'Brien, Scott, Powers (2015) conducted a study to understand the connectedness between Cognitive Behaviour Therapy can increase family openness in treating paediatric migraine. This study shows that Cognitive Behaviour Therapy was quick satisfying in better communication and increasing the family interpersonal relationship and thus, resulting in reduced level of family stress among the participants. Therefore, Cognitive Behaviour Therapy was found to be effective in dealing with family stress and also it helps improvement of better interpersonal relationship with family members.

Table 16

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Family Stress

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Family Stress	Nursing Students	Before	After	8.94*	.000
			Follow-up	14.09*	.000
		After	Before	-8.94*	.000
			Follow-up	5.15*	.000
		Follow-up	Before	-14.09*	.000
			After	-5.15*	.000

*-Significant at 0.05 level

Table 16 depicts the result of Post-hoc Analysis in family stress of nursing students. Based on the significant reduction in the level of family stress, Bonferroni Post-hoc analysis was carried out to identify which particular differences between pairs of mean and significant. The mean difference of before and after Cognitive Behaviour Therapy programme was 8.94, before and follow-up was 14.09 which were statistically significant. The mean difference between after and follow-up phase of Cognitive Behaviour Therapy programme was recorded as 5.15. Therefore, it's concluded that the therapy was effective in the management of family stress among nursing students. The techniques such as goal settings, the aim and achievement, the purposes of choosing this particular field gave them a clear path of identifying their purpose of choosing nursing course rather than any other. This way of highlighting their primary goal helps them to improve their passion and enlighten the worthiness of the course they have opted for.

Hence the Alternative Hypothesis 2.2, "There will be a significant reduction in Family stress among nursing students in Before, After and Follow-up without control group through Cognitive Behaviour Therapy", is accepted.

Figure 17

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Family Stress

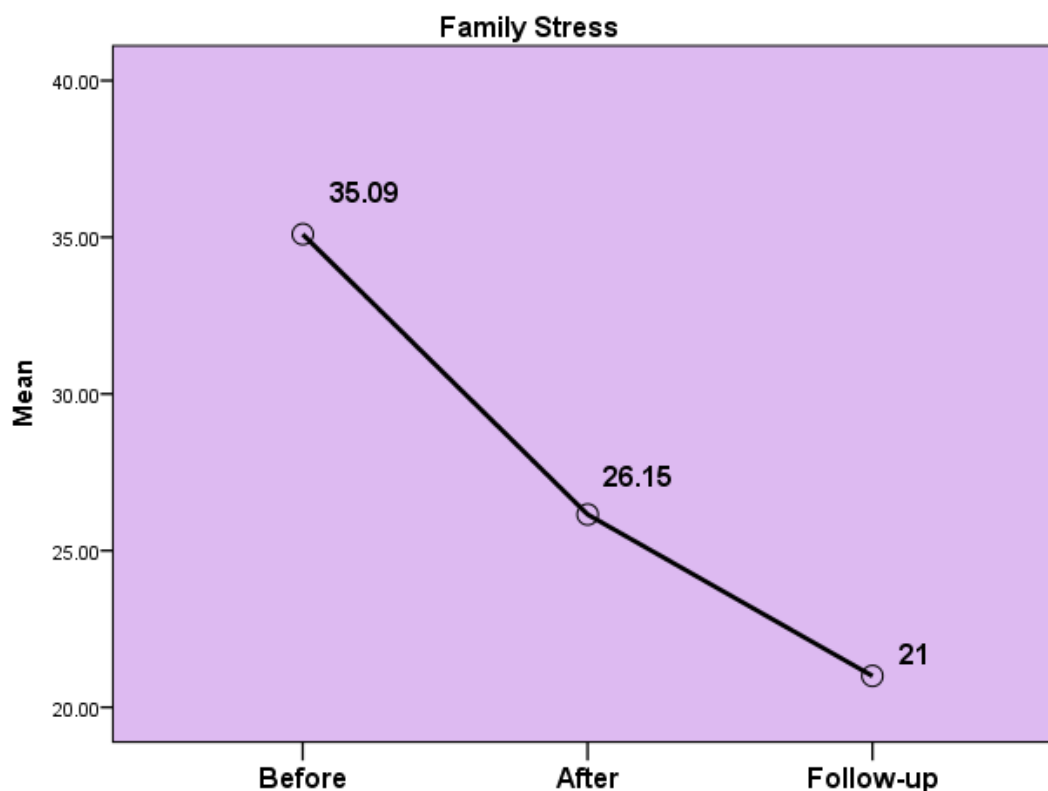


Figure 17 shows the before, after, and follow-up test phases of nursing students in family stress. The graph shows a drastic reduction in the level of family stress in the group after therapy. The follow-up data shows a decrease in the family stress level indicating that the students were well-versed in following the taught techniques and they become more insightful in dealing with their family stress with the learnt techniques of cognitive behaviour therapy.

(iii) Social Stress

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in social stress.

Table 17

Level of Social Stress among Nursing Students

N=150

Social Stress	Frequency	Percentage
Very High	3	2
Above Average	26	17
Average	20	13
Below Average	82	55
Low	19	13

The table 17 displays the level of social stress among nursing students. As the table represents clearly that 2% of the students experiences very high level of social stress, 17% of them go through above average level of social stress, 13% of them falls under the category of average level of social stress, a majority of 55% experiences below average level of social stress and 13% of the students faces low level of social stress. The social stress represents the stress faced by the nursing students by the social aspects which influence them to get more stressors of being highly responsible for themselves and the patients.

Figure 18

Level of Social Stress among Nursing Students

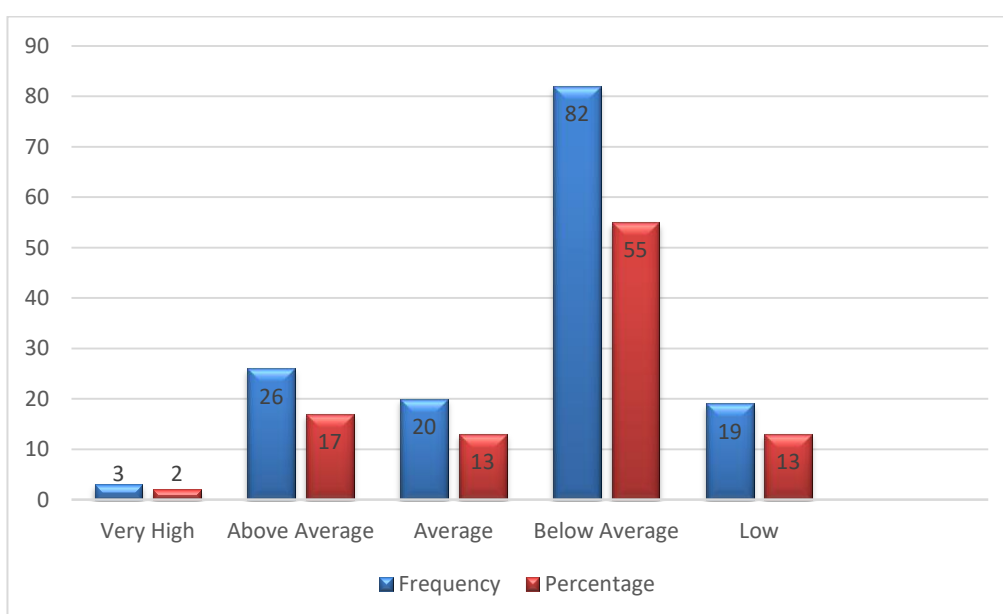


Table 18

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Social Stress

Variable	Groups	Phases	Mean	SD	N
Social Stress	Nursing Students	Before	15.59	5.67	52
		After	11.50	3.46	52
		Follow-up	8.98	2.67	52

Table 18 displays the mean and standard deviation of social stress among nursing students before, after and follow-up phases. The mean score for social stress before Cognitive Behaviour Therapy program was 15.59 and the standard deviation was 5.67, and it reduced to 11.50 as the mean score, 3.46 as standard deviation, after Cognitive Behaviour Therapy program and it was further reduced to 8.98 and 2.67 as mean and standard deviation scores in the follow-up phase. The students had shown a significant change from the before to the after phase of the Cognitive Behaviour Therapy program. Also, they were able to conserve the changes in the follow-up phase once the intervention was discontinued. Cognitive Behaviour Therapy was effective at handling the social stress.

Students were taught to identify the social stressors, which improved their ability to identify and rectify the social stress. This helps them to easily make out what could be possible reasons of social stressors which induce even more stress among students, and the possible ways to reduce the level of social stress. Therefore, it helped the students to enhance their perception towards social stress and eliminate the unwanted stressors for better performances.

Table 19

Repeated Measures ANOVA during before, after, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Social Stress.

N=52

Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	1159.397	2	579.699	92.207**
Greenhouse-Geisser	1159.397	1.232	941.234	92.207**
Huynh-Feldt	1159.397	1.247	929.872	92.207**
Lower-bound	1159.397	1.000	1159.397	92.207**

** - Significant at 0.01 level

Table 19 reveals the results of Repeated Measures ANOVA for social stress before, after and follow-up phases of Cognitive Behaviour Therapy and it clearly indicated significant differences. The results showed that when compared to before therapy score; there was a significant reduction in the level of social stress in after phase. There was a statistically significant differences were observed after Cognitive Behaviour Therapy program. Thus, Cognitive Behaviour Therapy was found to be effective in reducing social stress.

The techniques such as deep breathing worked like magic. Students whenever they experience social stress, especially in training set-ups, they were taught to maintain a calm and composed body language which the students were taught on how to remain calm and composed for better performance. This technique of deep breathing practices was found to be effective also less time consuming in the aspects of quick refreshment both psychologically and professional aspects.

Cognitive Behaviour Therapy was good in treating the repeated social stress resulting in greater cortisol stress response in child social anxiety disorder. Children with social anxiety disorder and increased social stress was exposed to CBT reflecting stronger cortisol reactivity and a higher responder rate (Asbrand, Heinrichs, Nitschke, Wolf, Schmidtdrof and Tuschen-Caffier, 2019).

Table 20

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Social Stress

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Social Stress	Nursing Students	Before	After	4.09*	.000
			Follow-up	6.61*	.000
		After	Before	-4.09*	.000
			Follow-up	2.51*	.000
		Follow-up	Before	-6.61*	.000
			After	4.09*	.000

*-Significant at 0.05 level

Table 20 depicts the result of Post-hoc Analysis in social stress of nursing students. Based on the significant reduction in the level of social stress, Bonferroni Post-hoc analysis was carried out to identify which particular differences between pairs of mean and significant. The mean difference of before and after Cognitive Behaviour Therapy program was 4.09, before and follow-up was 6.61 which were statistically significant. The mean difference between after and follow-up phase of Cognitive Behaviour Therapy programme was recorded as 2.51. Therefore, it is concluded that the therapy was effective in the management of social stress among nursing students. The most followed technique to reduce the social stress was to good body language, maintaining calm and composed face, a tension free psychological mind set, deep breathing practices helped the nursing students to deal efficiently in order to manage with their social stress.

Hence the Alternative Hypothesis 2.3, "There will be a significant reduction in Social stress among nursing students in Before, After and Follow-up without control group through Cognitive Behaviour Therapy", is accepted.

Figure 19

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Social Stress

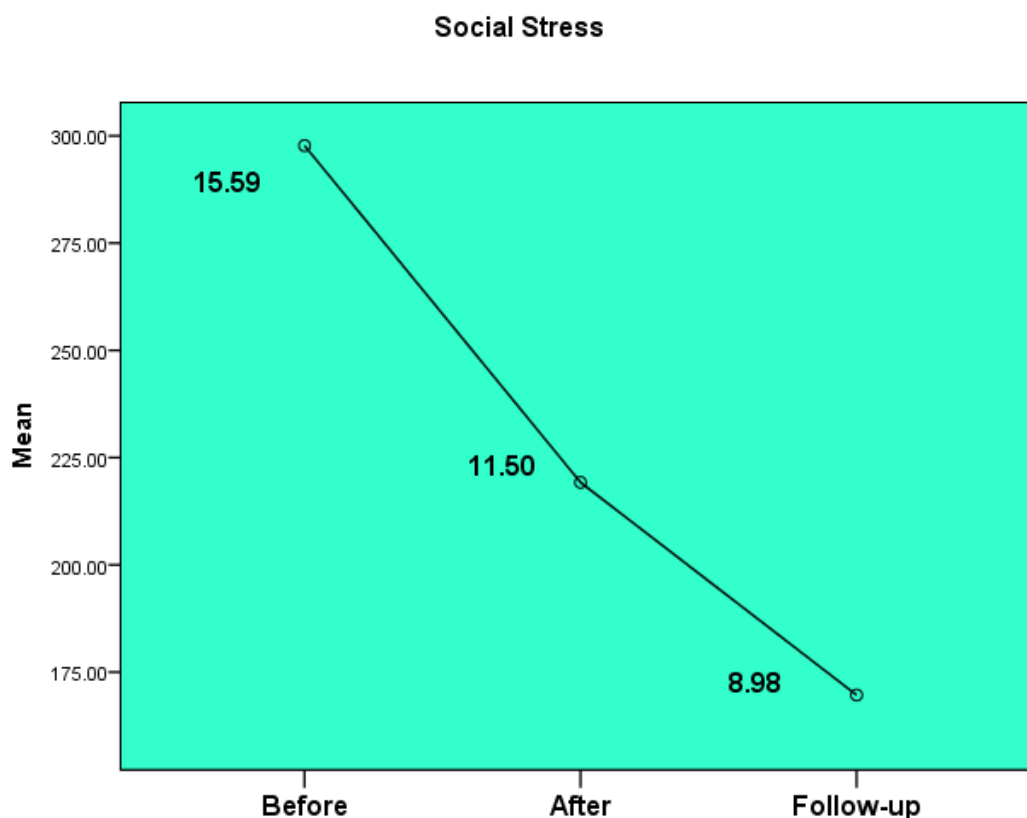


Figure 19 shows the before, after, and follow-up test phases of nursing students in social stress. The graph shows a drastic reduction in the level of social stress in the group after therapy. The follow-up data shows even more reduced level of social stress expressing the nursing students were good in handling the social stress causing situations and dealing effectively using the taught training. Thus, CBT was good in dealing with social stress of the nursing students which was more effective and useful.

(iv) Educational Stress

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in social stress.

Table 21

Level of Educational Stress among Nursing Students

N=150

Educational Stress	Frequency	Percentage
Very High	35	23
High	26	17
Above Average	31	21
Average	9	6
Below Average	13	9
Low	36	24

Level of educational stress is represented in the above table 21. As per the results obtained 23% of the students experiences very high level of educational stress, 17% of the students experiences high level of educational stress, 21% of the students score above average level of educational stress, 6% of the nursing students falls under average category, 9% of them scored as below average and 24% of them scored as Low level of education stress. Students who have scored above average, high and very high level of educational stress may experience the initial difficulties in understanding the clinical terms as they need to adapt to the habit of excessive reading along with the clinical posting. This contributes to the higher level of educational stress among nursing students.

Figure 20

Level of Educational Stress among Nursing Students

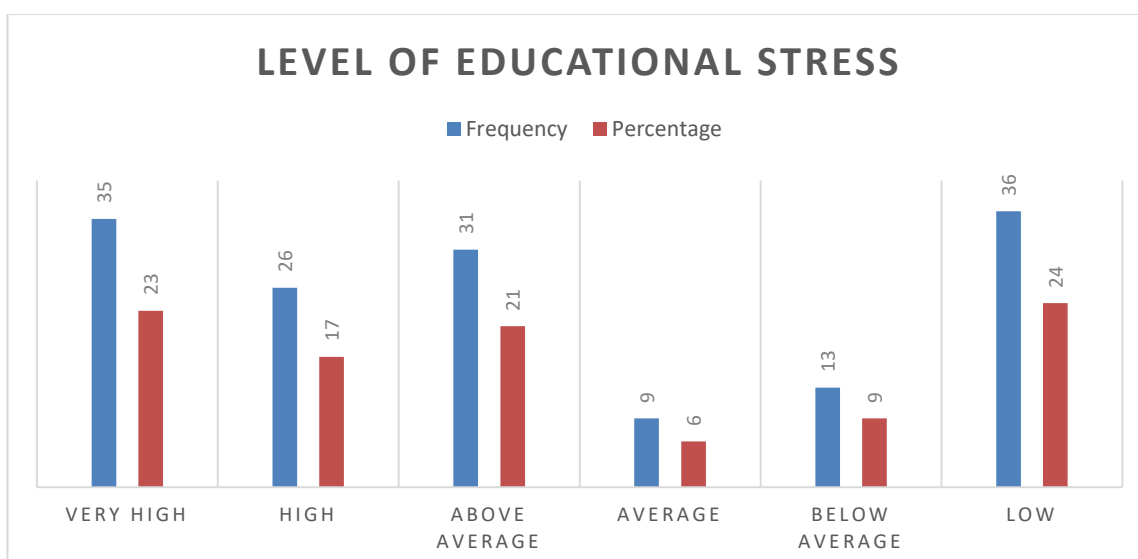


Table 22

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Educational Stress

Variable	Groups	Phases	Mean	SD	N
Educational Stress	Nursing Students	Before	87.00	14.27	52
		After	64.67	14.11	52
		Follow-up	50.78	11.20	52

Table 22 displays the mean and standard deviation of educational stress among nursing students before, after and follow-up phases. The mean score for educational stress before Cognitive Behaviour Therapy program was 87.00 and the standard deviation was 14.27, and it reduced to 64.67 as the mean score, 14.11 as standard deviation, after Cognitive Behaviour Therapy program and it was further reduced to 50.78 and 11.20 as mean and standard deviation scores in the follow-up phase. The students had shown a significant change from the before to the after phase of the Cognitive Behaviour Therapy program. Also, they were able to conserve the changes in the follow-up phase once the intervention was discontinued. Cognitive Behaviour Therapy was effective at changing educational stress coping skills.

A study done by Simon et al., (2021) states that Cognitive Behaviour Therapy acts in the first line to treat educational stress among students compared to yoga. Students were exposed to CBT programme for a duration 12 weeks of time interval and they resulted in better improved in lowering the level of educational stress and thus enhancing their academic performances gradually.

Table 23

Repeated Measures ANOVA during Before, After, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Educational Stress.

N=52

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	34710.859	2	17355.429	269.617**
Greenhouse-Geisser	34710.859	1.537	22586.143	269.617**
Huynh-Feldt	34710.859	1.575	22035.759	269.617**
Lower-bound	34710.859	1.000	34710.859	269.617**

**.- Significant at 0.01 level

Table 23 depicts the results of Repeated Measures ANOVA for educational stress before, after and follow-up phases of Cognitive Behaviour Therapy and it clearly indicated significant differences. The results showed that when compared to before therapy score; there was a significant reduction in the level of educational stress in after phase. There was statistically significant differences were observed after Cognitive Behaviour Therapy programme. Thus, Cognitive Behaviour Therapy was found to be effective in controlling educational stress.

Stress level in the field of education is growing bigger each day and strongly rooted among students. Cognitive Behaviour Therapy shows a significant reduction in the stress level among students. This study proves that there was a great reduction in the study stress especially in the domain of education, therefore, this educational stress can be put down efficaciously using Cognitive Behaviour Therapy programme (Otu, Dike, Ebizie, Chigbu and Out, 2021).

Table 24

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Educational Stress

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Educational Stress	Nursing Students	Before	After	22.32 [*]	.000
			Follow-up	36.21 [*]	.000
		After	Before	-22.32 [*]	.000
			Follow-up	13.88 [*]	.000
		Follow-up	Before	-36.21 [*]	.000
			After	-13.88 [*]	.000

*-Significant at 0.05 level

Table 24 depicts the result of Post-hoc Analysis in educational stress of nursing students. Based on the significant reduction in the level of educational stress, Bonferroni post-hoc analysis was carried out to identify which particular differences between pairs of mean and significant. The mean difference of before and after Cognitive Behaviour Therapy program was 22.32, before and follow-up was 36.21 which were statistically significant. The mean differences between after and follow-up phase was 13.88. Cognitive Behaviour Therapy techniques such as cognitive rehearsal practices were taught to the students and they were asked to follow the cognitive rehearsal patterns to avoid getting more of educational stress. Making a regular routine of learning helped them to perform better and increases the rate of academic performance among the nursing students. Therefore, it is concluded that the therapy was effective in the management of educational stress among nursing students.

Hence the Alternative Hypothesis 2.4, "There will be a significant reduction in Educational stress among nursing students in Before, After and Follow-up without control group through Cognitive Behaviour Therapy", is accepted

Figure 21

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Educational Stress

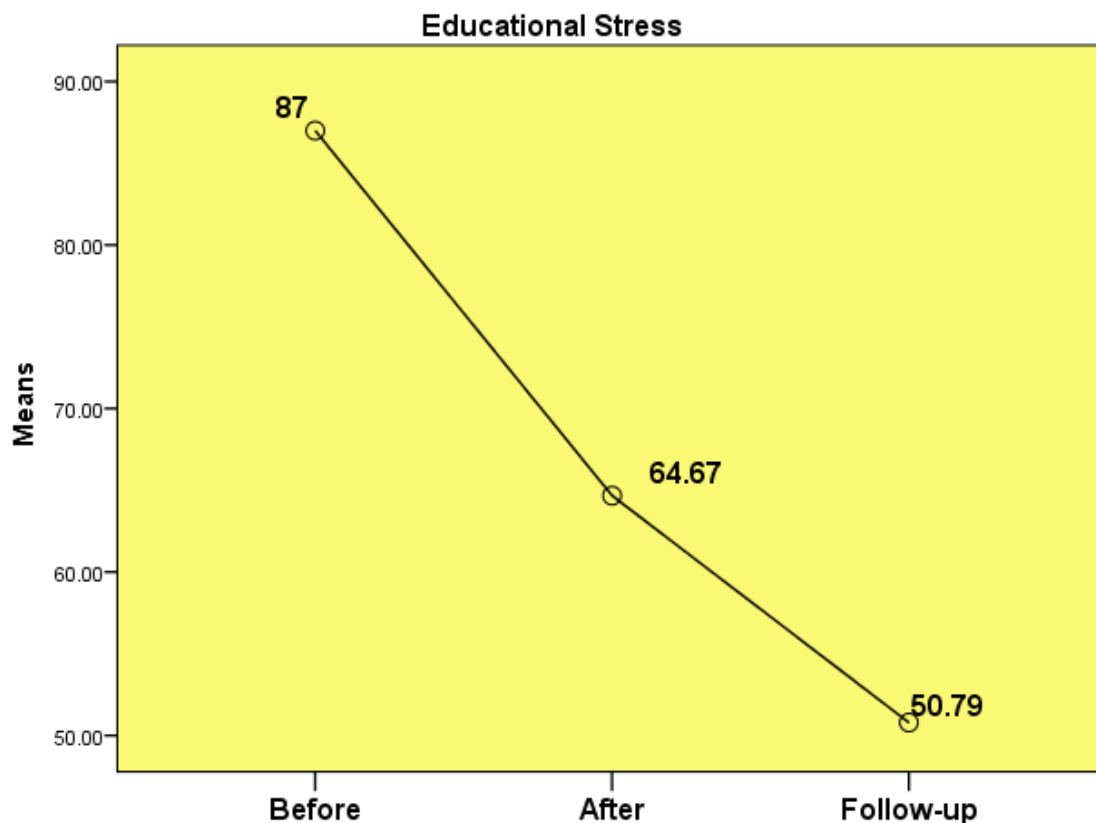


Figure 21 shows the before, after, and follow-up test phases of nursing students in educational stress. The graph shows a drastic reduction in the level of social educational in the group after therapy. The follow-up data shows even more reduced level of educational stress expressing the nursing students were good in handling the study-oriented stress causing situations and dealing effectively using the taught training. Thus, CBT was good in dealing with educational stress of the nursing students and improved their academic performances.

(v) Ego Threat

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in Ego threat.

Table 25

Level of Ego Threat among Nursing Students

N=150

Ego Threat	Frequency	Stress
Very High	127	85
High	15	10
Above Average	8	5

Table 25 displays the level of ego threat among nursing students. Majority of the nursing students come under the category of very high level of ego threat with 85% this state clearly explaining that the nursing students experiences higher the level of psychological distress and that undermines the ability of their performance to normal day-to-day daily life activities. This results in enhanced level of diminishing person’s opinion on herself/himself. Ten percent of the students fall under the category of high and only 5 percent of the students scored above average level of ego threat.

Figure 22

Level of Ego threat among Nursing Students

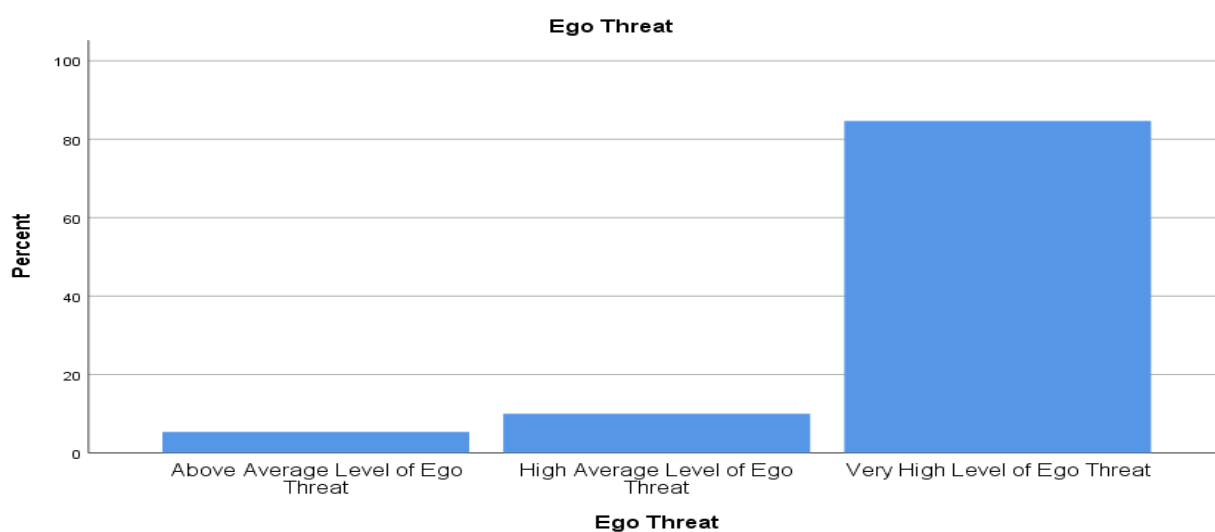


Table 26

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Ego Threat.

Variable	Groups	Phases	Mean	SD	N
Ego-threat	Nursing Students	Before	38.98	8.18	52
		After	28.92	6.48	52
		Follow-up	21.98	5.16	52

Table 26 displays the mean and standard deviation of ego-threat among nursing students before, after and follow-up phases. The mean score for ego-threat before Cognitive Behaviour Therapy program was 38.40 and the standard deviation was 8.17, and it reduced to 28.38 as the mean score, 6.86 as standard deviation, after Cognitive Behaviour Therapy program and it was further reduced to 21.81 and 5.16 as mean and standard deviation scores in the follow-up phase. The nursing students had shown a significant change from the before to the after phase of the Cognitive Behaviour Therapy program. Also, they were able to conserve the changes in the follow-up phase once the intervention was discontinued.

The students were asked to well identify and understand on the aspects of what could be the reasons for ego threat thus identifying these patterns would help them to act with caution and learn to avoid such ego threats and improve with their personal growth henceforth, reducing the level of stress caused by ego threat. Cognitive Behaviour Therapy was effective in dealing with ego-threat.

Table 27

Repeated Measures ANOVA during Before, After, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Ego-threat.

N=52

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	7598.115	2	3799.058	230.399**
Greenhouse-Geisser	7598.115	1.480	5132.403	230.399**
Huynh-Feldt	7598.115	1.514	5017.952	230.399**
Lower-bound	7598.115	1.000	7598.115	230.399**

** - Significant at 0.01 level

Table 27 shows the results of Repeated Measures ANOVA for ego-threat in before, after and follow-up phases among nursing students and it clearly indicates significant differences. The results showed that there was a significant reduction in the level of ego threat in after and follow-up phases of Cognitive Behaviour Therapy program. Students were trained on emotion regulation which helped them channelize at the right path of problem-solving and improve their well-being. The technique of emotion regulation was found to be highly effective as they found right direction on the aspects of dealing with emotions with less ego-threat. It provided them to handle situations in a better manner comparatively before CBT intervention programme. The emotion regulation method also added on a skill of problem solving giving them a better critical thinking practice and solve the issues at the emerging level. Therefore, the nursing students who were exposed to the Cognitive Behaviour Therapy intervention programme was way more better and gave us a significant results in dealing with the ego-threat among nursing students in before, after and follow-up phases of the programme.

Table 28

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Ego-threat

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Ego threat Stress	Nursing Students	Before	After	10.06	.000
			Follow-up	17.00	.000
		After	Before	-10.06	.000
			Follow-up	6.94	.000
		Follow-up	Before	-17.00	.000
			After	-6.94	.000

*-Significant at 0.05 level

Table 28 depicts the result of Post-hoc Analysis in ego-threat of nursing students. Bonferroni post-hoc analysis was carried out to identify which particular differences between pairs of means are significant. The mean differences between before and after Cognitive Behaviour Therapy was 10.06, before and follow-up phase was 17.00 which were statistically significant. The mean differences between after and follow-up phase was noted as 6.94. Therefore, it can be concluded that the Cognitive Behaviour Therapy program was found to be effective in reducing ego-threat. A collaboration of CBT with mindfulness helps to prevent and manage psychological/mental issues also it promotes well-being and building a foundations of adaptability and flexibility in dealing with the long-term uncertainty and profound changes to the social, economic aspects (Antonova, Schlosser, Pandey and Kumari, 2021).

Hence the Alternative Hypothesis 2.5, “There will be a significant reduction in Ego-threat among Nursing Students in Before, After and Follow-up without control group through Cognitive Behaviour Therapy”, is accepted

Figure 23

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Ego threat

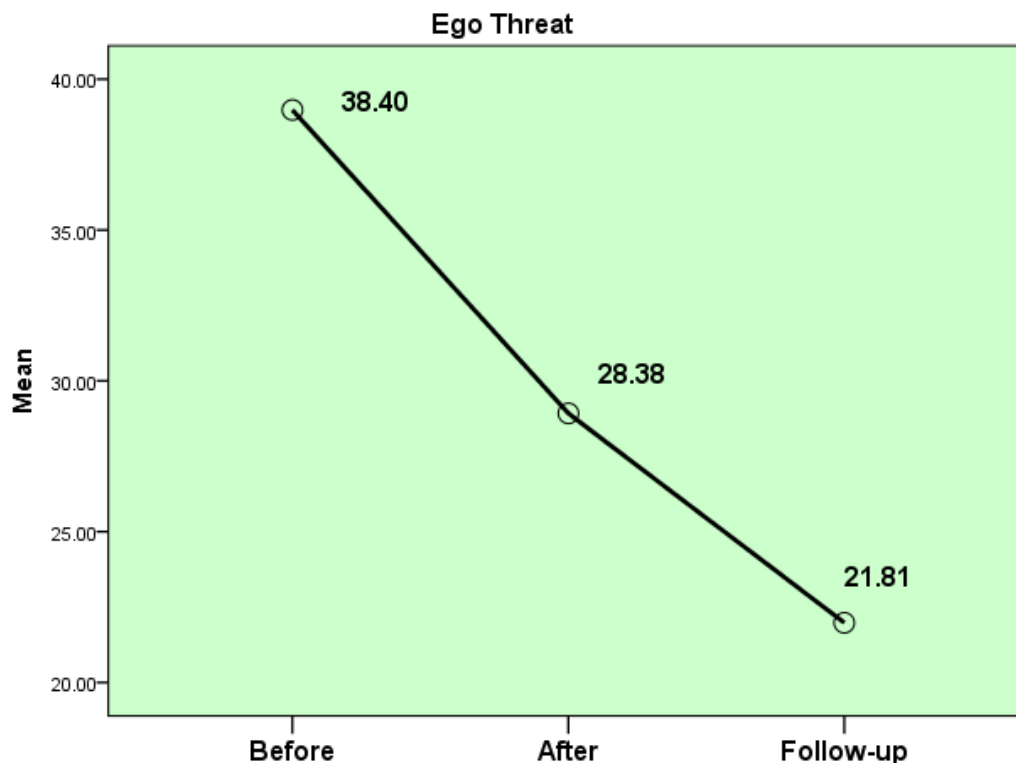


Figure 23 shows the before, after, and follow-up test phases of nursing students in ego threat. The graph shows a drastic reduction in the level of ego threat in the group after therapy. The follow-up data shows even more reduced level of ego threat indicating that the nursing students were good in dealing with the event or situating that could lead to ego threat resulting in increased. Thus, CBT was found to be highly efficacious in dealing with the ego threat and thus improving the student’s ability to handle their ego threat in wise manner.

(vi) Bereavement

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in Bereavement.

Table 29

Level of Bereavement among Nursing Students

N=150

Bereavement	Frequency	Percentage
Very High	43	29
High	63	42
Above Average	39	26
Average	2	1
Below Average	3	2

The above table 29 presents the level of bereavement among nursing students. The obtained data helps us in understanding the nursing student’s experiences critical level of bereavement which is a complex and highly personal process that involves a range of emotions, thoughts and behaviour that individuals come to terms with loss. Thus, the nursing students experiences bereavement during training sessions. Twenty nine percent of the students reported as very high level of bereavement, 42% of the students shows high level, 26% showed as above average level of bereavement and finally only 1% and 2% recorded as average and below average level of bereavement.

Figure 24

Level of Bereavement among Nursing Students

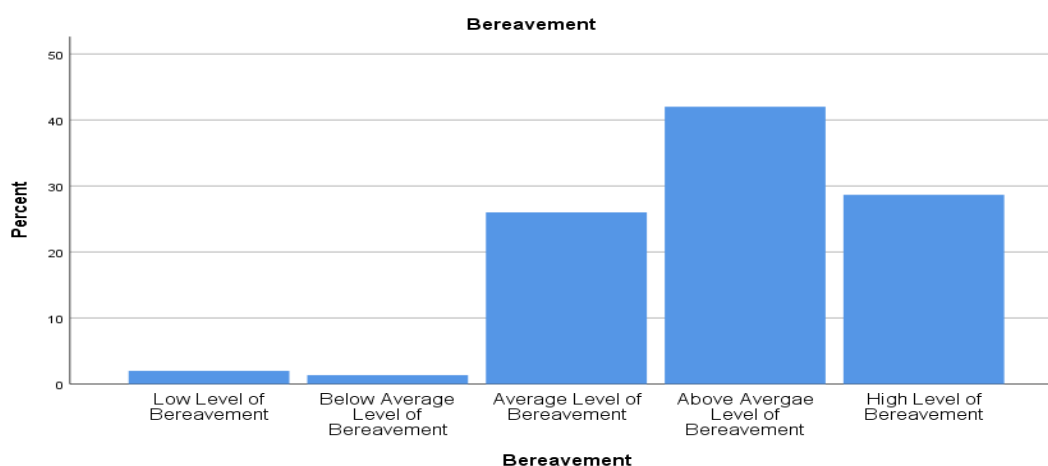


Table 30

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behaviour Therapy in Bereavement.

Variable	Groups	Phases	Mean	SD	N
Bereavement	Nursing Students	Before	22.73	4.10	52
		After	15.88	4.43	52
		Follow-up	12.36	4.11	52

Table 30 shows the descriptive statistics of the bereavement among nursing students. The mean score and standard deviation of the bereavement of the students before Cognitive Behaviour Therapy program was 22.73 and 4.10. After Cognitive Behaviour Therapy program the mean score recorded as 15.88 and the standard deviation score was 4.43, and during the follow-up phase the mean and standard deviation scores were 12.36 and 4.11. The students had shown a significant change from the before to the after phase of the research. Students with bereavement were taught with open-up talks with their beloved person whom they were close with. A genuine conversation would be helpful in dealing with bereavement. They nursing students were provided with one-to-one counselling in order to provide them complete exposure towards healing them. Cognitive Behaviour Therapy was effective in dealing with bereavement and thus it brings-up a change from within and helps the bereaved persons to restore back their normal life after few sessions of CBT programme. Different strategies of CBT techniques would provide even more highly beneficial seen differences among the presented participants (Currier, Holland and Neimeyer, 2010).

Table 31

Repeated Measures ANOVA during Before After, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Bereavement.

N=52

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	2889.397	2	1444.699	190.567**
Greenhouse-Geisser	2889.397	1.436	2011.726	190.567**
Huynh-Feldt	2889.397	1.467	1970.233	190.567**
Lower-bound	2889.397	1.000	2889.397	190.567**

** - Significant at 0.01 level

Table 31 shows the results of Repeated Measures ANOVA in bereavement during before, after and follow-up among nursing students and it clearly indicates significant differences. The results showed that there was a significant reduction in the level of bereavement in after and follow-up phase of cognitive behaviour. As a professional group of students it is understandable that they experience death of patients which affects them psychologically leaving behind in the aspect of bereavement or grief. Students were taught with few techniques, one of the most important part was acceptance. Accepting that the existing patient was no more given them a practical and reality oriented mindfulness in dealing with the situation. Students were taught with thought stopping technique which helped them way more effective comparatively, and stops the negative pattern of thought.

A study done by Stephen and Paul (2001) states that Cognitive Behaviour Therapy would be helpful in reconstruction of meaning in dealing with bereavement of an individual. Following few cognitive tasks would be highly helpful to deal with the bereavement which is more of therapeutic oriented interaction within bereaved individuals.

Table 32

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Bereavement

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Bereavement	Nursing Students	Before	After	22.32 [*]	.000
			Follow-up	36.21 [*]	.000
		After	Before	-22.32 [*]	.000
			Follow-up	13.88 [*]	.000
		Follow-up	Before	-36.21 [*]	.000
			After	-13.88 [*]	.000

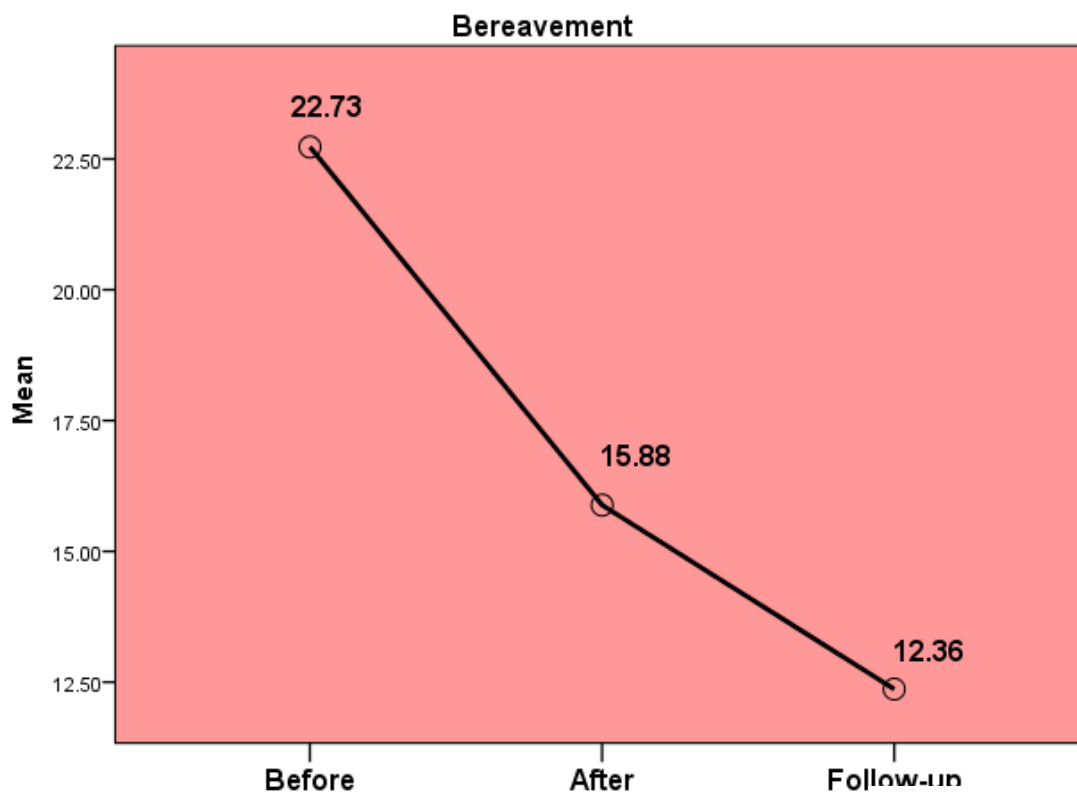
*-Significant at 0.05 level

Table 32 depicts the result of Post-hoc Analysis in bereavement of nursing students. Bonferroni Post-hoc Analysis showed that hostility reduced significantly from the before phase to the after phase with the score of 22.32, before and follow-up was 36.21 and after and follow-up was 13.88 which were statistically significant. The rational and practical technique of accepting the reality was found to be highly effective in accepting the real life scenario and thus resulting in the better understanding of not to indulge more into a loss of someone, and grief for long duration. Negative thought patterns were the disturbing as reported by the nursing students. Therefore, thought stopping and auto-suggestion techniques were found to be highly useful to treat them with positive outcomes. A study done by Boelen, Lonneke, Lenferink and Spuij (2021), reveals that prolonged grief and bereavement can be treated effectively with Cognitive Behaviour Therapy intervention programme. Supportive counselling was found to be superior long-term effect resulting in strengthening children and adolescent facing challenges with bereavement.

Hence the Alternative Hypothesis 2.6, "There will be a significant reduction in Bereavement among nursing students during before, after and follow-up without control group through Cognitive Behaviour Therapy Interventions", is accepted

Figure 25

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Bereavement



Footnote

The result of the bereavement in the before, after, and follow-up phases of the participants is presented in figure 25. The graph indicates that after the intervention, the results of the students reduced noticeably. Also, it is to be noted that even after the termination of the Cognitive Behaviour Therapy programme the bereavement has been reduced prominently. Students' follow-up result shows that they know they have needed skills to be competent.

(vi) Separation

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in Separation.

Table 33

Level of Separation among Nursing Students

N=150

Separation	Frequency	Percent
Very High	3	2
Above Average	3	2
Average	55	37
Below Average	81	54
Low	8	5

The above table 33 represents the level of separation stress among nursing students. The separation stress is being encountered among the nursing students however, from the obtained data it is understood that the students were well aware about their separation and thus, resulting as a majority of 54% of the nursing students recorded as below average level of separation issues and 37% of the students scored under average level of separation stress and only 2% of the students have recorded as above average and very high level of separation stress.

Figure 26

Level of Separation among Nursing Students

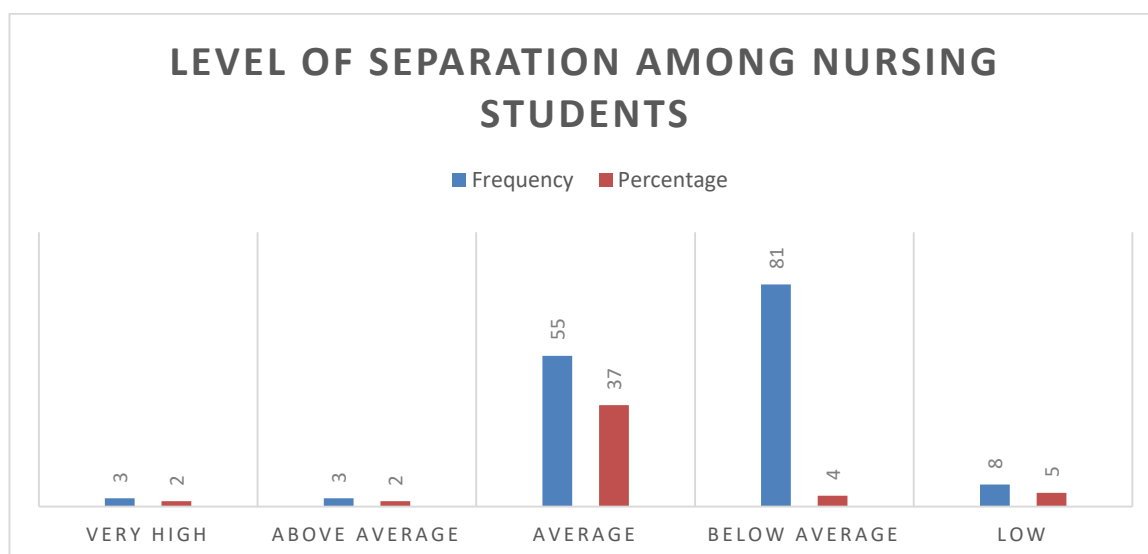


Table 34

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Separation

Variable	Groups	Phases	Mean	SD	N
Separation	Nursing Students	Before	15.19	4.58	52
		After	10.26	3.86	52
		Follow-up	8.13	3.30	52

Table 34 explains the descriptive statistics on separation of nursing students in before, after and follow-up phases. The mean score for separation before Cognitive Behaviour Therapy was 15.19, and it reduced to 10.26 after Cognitive Behaviour Therapy program and further reduced to 8.13 in the follow-up phase. This shows that the students who have undergone the Cognitive Behaviour Therapy found to be effective and useful in reducing their separation.

Separation is a part of stress which spoils the basic drive of each individual. Therefore, the students were first taught about the meaning of separation, and they were asked to pen down about the actual and factual reason behind the separation of staying away from family, friends and adjustment problems occurs to the new environment. Once initial understanding about the separation was discussed in details the students developed insight in understanding about the practical reality and then they sounded good in accepting and ready to face the real world with optimistic approach.

Cognitive Behaviour Therapy is one of the best therapies in treating separation anxiety issues, giving students a brief orientation about the separation anxiety, which intrudes their daily life events was found to be reduced. Especially in dealing with young students CBT would be the best in treating the separation issues (Caputi, Micheline and Scaini, 2022).

Table 35

Repeated Measures ANOVA during Before, After, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Separation.

N=52				
Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	1362.474	2	681.237	165.368**
Greenhouse-Geisser	1362.474	1.388	981.874	165.368**
Huynh-Feldt	1362.474	1.414	963.496	165.368**
Lower-bound	1362.474	1.000	1362.474	165.368**

**.- Significant at 0.01 level

Table 35 demonstrates the results of Repeated Measures ANOVA for separation in before, after and follow-up among nursing students and it clearly indicates the significant differences. The results showed that when compared to before Cognitive Behaviour Therapy program scores, there was a significant reduction in the level of separation was observed in after and follow-up phases of Cognitive Behaviour Therapy program. The students were debriefed about their purpose of their education. Knowing the worth and real service oriented profession of their education system, the students showed improved involvement and they started to concentrate more on their training.

Table 36

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Separation

N=52					
Measure	Group	Phases	Phases	Mean Difference	Sig.
Separation	Nursing Students	Before	After	4.923*	.000
			Follow-up	7.058*	.000
		After	Before	-4.923*	.000
			Follow-up	2.135*	.000
		Follow-up	Before	-7.058*	.000
			After	-2.135*	.000

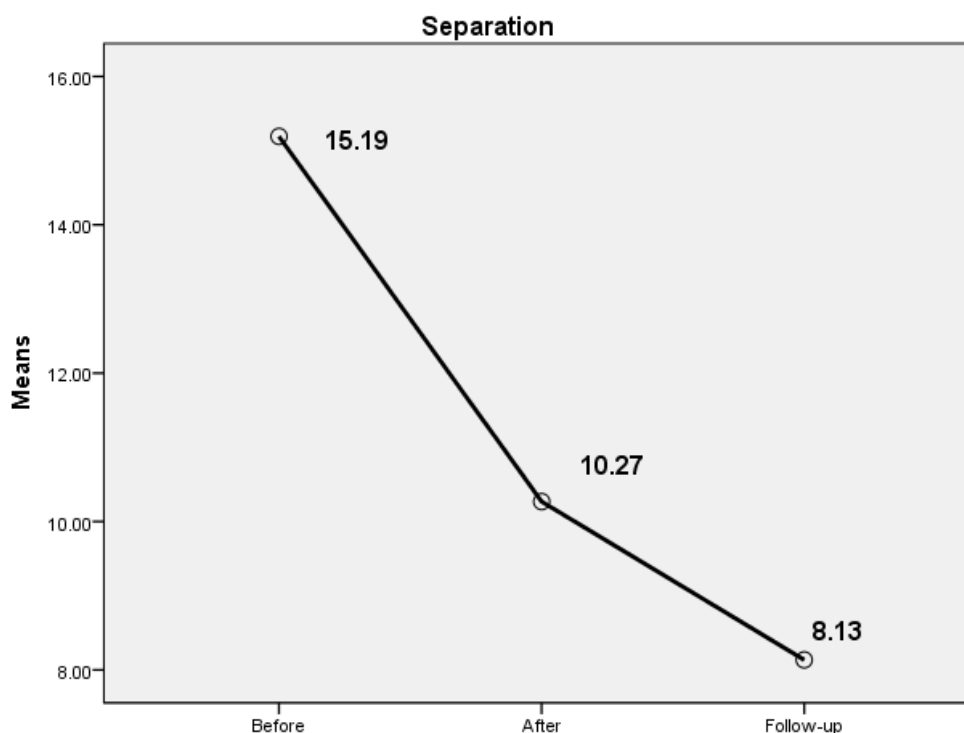
*.-Significant at 0.05 level

Table 36 depicts the result of Post-hoc Analysis in separation of nursing students. Bonferroni post-hoc analysis was carried out to identify which particular differences between the pairs of the means are significant. The mean difference of before and after Cognitive Behaviour Therapy program was 4.923 before and follow-up phase was 7.058 which were statistically significant and after the program and follow-up score was 2.135 which was statistically significant. The students were recommended to initially build a very good communication between friends and other classmates. Thus, Cognitive Behaviour Therapy was effective in building good interpersonal relationships resulting better training and learning experiences among the nursing students. Therefore, CBT was found to highly effective in dealing separation stress and helps them to find productive alternatives to improve them more professional and academically oriented students.

Hence the Alternative Hypothesis 2.7, “**There will be a significant reduction in separation stress of nursing students during before, after and follow-up without control group through Cognitive Behaviour Therapy Interventions**”, is accepted.

Figure 27

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Separation



The result of the separation in the before, after, and follow-up phases of the participants is presented in figure 27. The graph indicates that after the intervention, the results of the students reduced in both after and follow-up phases of Cognitive Behaviour Therapy programme. It clearly indicates that, the Cognitive Behaviour Therapy programme was highly beneficial in reducing the level of separation stress among nursing student.

(vii) Personal Setback

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in Separation.

Table 37

Level of Personal Setback among Nursing Students

<i>N=150</i>		
Personal Setback	Frequency	Percent
Very High	5	3
High	58	39
Average	31	21
Below Average	29	19
Low	9	6
Very Low	18	12

Personal setback is one of the sub scales of stress which has been depicted in table 36. A majority of 39% of the students showed high level of personal setback, only 3% of the students showed very high level of personal setback. Twenty one percent of the students recorded as average level of personal setback, 19% of them showed below average level, 6% displayed low and 12% of the students recorded as very low level of personal setback among nursing students.

Figure 28

Level of Personal Setback among Nursing Students

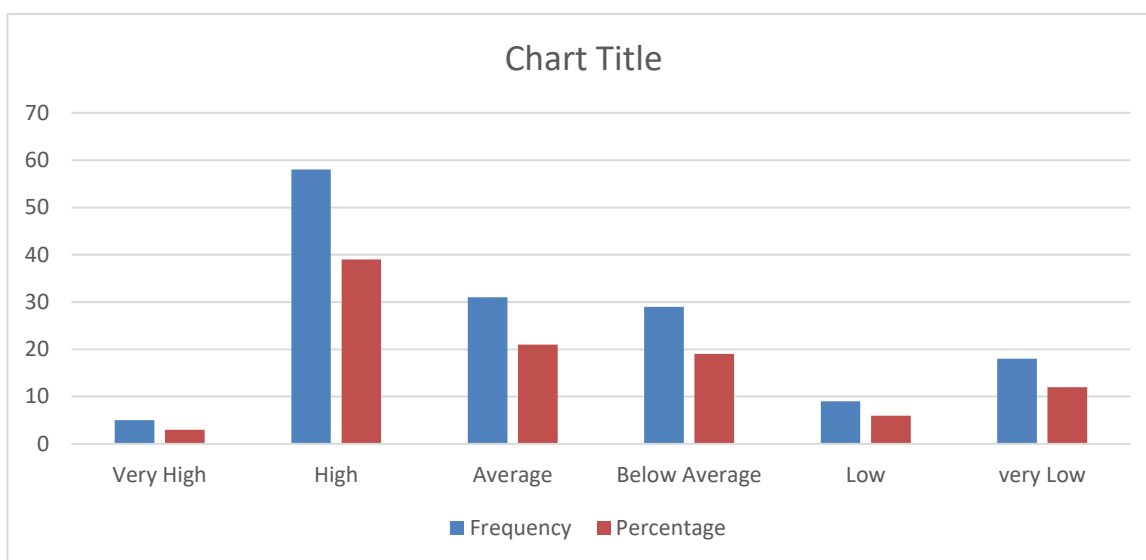


Table 38

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Personal Setback.

N=52

Variable	Groups	Phases	Mean	SD	N
Personal Setback	Nursing Students	Before	36.42	5.86	52
		After	27.36	5.54	52
		Follow-up	21.48	5.43	52

Table 38 explains the descriptive statistics on personal setback of nursing students in before, after and follow-up phases. The mean score for personal setback before Cognitive Behaviour Therapy was 36.42, and it reduced to 27.36 after Cognitive Behaviour Therapy program and further reduced to 21.48 in the follow-up phase. The standard deviation scores for personal setback were as follows 5.86 for before cognitive behaviour therapy, 5.54 was recorded after Cognitive Behaviour Therapy and 5.43 was inferred in follow-up phase of cognitive behaviour therapy. This shows that the students who have undergone the Cognitive Behaviour Therapy found to be effective and useful in identifying their personal setbacks .

Table 39

Repeated Measures ANOVA during Before, After, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Personal Setback.

N=52

Phases	Sum of Squares	df	Mean Square	F
Sphericity Assumed	5892.346	2	2946.173	276.122**
Greenhouse-Geisser	5892.346	1.613	3653.198	276.122**
Huynh-Feldt	5892.346	1.658	3554.387	276.122**
Lower-bound	5892.346	1.000	5892.346	276.122**

**.- Significant at 0.01 level

Table 39 shows the results of Repeated Measures ANOVA for personal setback in before, after and follow-up phases among nursing 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 personal setback and sustained in the after and follow-up phases. The personal setback is nothing but a loss which affects personal and professional life of an individual. The CBT intervention programme dealt with differentiating the personal and professional setbacks which acts as an hindrance in preventing their personal setbacks. On differentiating both personal and professional setbacks, the students become much aware about their presenting problems and they easily went through the events or situations which have nothing to do with their present life of the nursing students. Hence, this method of providing them a clear picture and improving them was found to be highly effective in dealing with their personal setbacks which has been experienced by the nursing students. As a result indicates, the students have shown a better performance in dealing with their personal setbacks and improved both personal and professional life.

Table 40

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Personal Setback.

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Personal Setback.	Nursing Students	Before	After	9.06*	.000
			Follow-up	14.94*	.000
		After	Before	-9.06*	.000
			Follow-up	5.88*	.000
		Follow-up	Before	-14.94*	.000
			After	-5.88*	.000

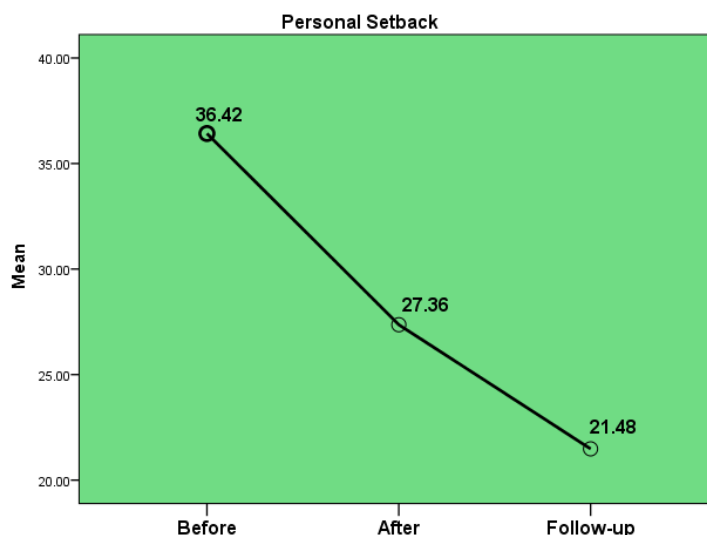
*-Significant at 0.05 level

Table 40 shows the results of Post-hoc Analysis in the aggression among adolescent boys. Based on the significant reduction in the level of aggression, Bonferroni post-hoc analysis was carried out to identify which particular difference between pairs of means are significant. The mean difference of before and after phases was 9.06 before and follow-up was 14.94 which were statistically significant and after and follow-up was 5.88 which was statistically significant. The technique of relaxation and identifying the personal and social setbacks was taught to the students. The relaxation technique involved with the practice of deep breathing, whenever the nursing students get a regressed thought or situation related to their personal setbacks. This method helped the nursing students to deal with their tensed and/or emotional situation which triggers personal setback. Therefore, Cognitive Behaviour Therapy was found to be efficacious in dealing with their personal setbacks by neglecting by their negative aspects and understanding the consequences of the personal setback.

Hence the Alternative Hypothesis 2.8, **“There will be a significant reduction in personal setback among nursing students in before, after and follow-up without control group through Cognitive Behaviour Therapy Intervention”**, is accepted

Figure 29

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Personal Setback.



The result of the overall aggression in the before, after, and follow-up phases of the participants is presented in figure28. The graph indicates that after the intervention, the results of the students reduced noticeably. However, the follow-up results showed the aggression reduced even after the intervention stopped. Students’ follow-up result shows that they know they have needed skills to be competent.

(ix) Health of Others

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in health of others.

Table 41

Level of Health of others among Nursing Students

N=150

Health of Others	Frequency	Stress
Very High	4	3
High	8	5
Above Average	40	27
Average	24	16
Below Average	68	45
Low	6	4

This table shows the level of health of others of the nursing students. Only 3% of the students recorded as very high, 5% reported as high and 27% of the students recorded as above average level of health of others showing they have high level of concern on the patients they handle with. Whereas, 16% of the students recorded as average, a majority of 45% reported as below average and 4% recorded as low level of health of others among nursing students.

Figure 30

Level of Health of others among Nursing Students

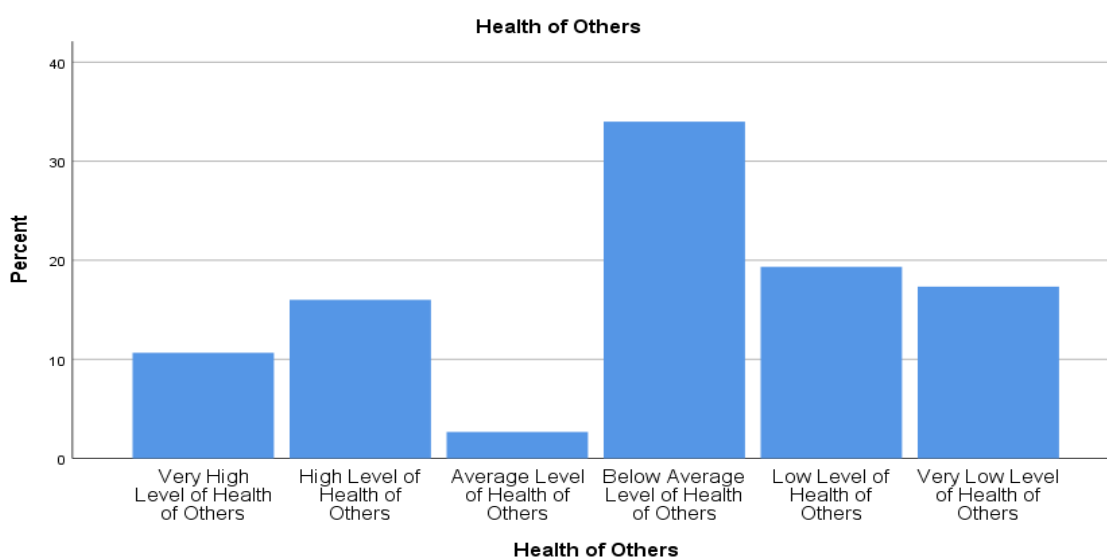


Table 42

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behaviour Therapy in Health of others.

Variable	Groups	Phases	Mean	SD	N
Health of others	Nursing Students	Before	25.92	4.57	52
		After	18.40	4.87	52
		Follow-up	13.92	4.74	52

Table 42 represents the descriptive statistics of health of others among nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy program. The mean score and standard deviation of health of others among nursing

students in before Cognitive Behaviour Therapy program was 25.92 and 4.57, after Cognitive Behaviour Therapy program the mean score was 18.40 and the standard deviation score was 4.87 and in follow-up phase the mean and standard deviation scores were 13.92 and 4.74. Therefore, it can be inferred from the above results that the health of others sub-scale of stress was found to be effective after Cognitive Behaviour Therapy program and sustained the change even during the follow-up phase. Therefore, the results show that Cognitive Behaviour Therapy played a significant role in bringing changes in students' concern towards health of others. Students were taught emotion regulation and self-control to understand and identify their emotion. Identifying the emotions helped them to control and train themselves into a professional aspects rather than normal people.

Table 43

Repeated Measures ANOVA during before, after, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Health of others.

N=52

Phases	Sum of Squares	Df	Mean Square	F
Sphericity	3824.01	2	1912.01	222.80**
Assumed				
Greenhouse-Geisser	3824.01	1.51	2534.58	222.80**
Huynh-Feldt	3824.01	1.55	2475.41	222.80**
Lower-bound	3824.01	1.00	3824.01	222.80**

** - Significant at 0.01 level

Table 43 shows the results of Repeated Measures ANOVA for health of others in before, after and follow-up phases among nursing 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 health of others and even more reduced in the after and follow-up phases among nursing students. The health of others explains about the health of patients or the patients whom they meet in their training programme would create a level of stress among nursing students. Being the freshers, the nursing students who experiences a new professional area would not be limiting their empathy or care or concern towards patients leading to increased stress.

Table 44

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Health of others

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Health of others	Nursing Students	Before	After	7.52*	.000
			Follow-up	12.00*	.000
		After	Before	-7.52*	.000
			Follow-up	4.48*	.000
		Follow-up	Before	-12.00*	.000
			After	-4.48*	.000

*-Significant at 0.05 level

Table 44 shows the results of Post-hoc Analysis in the health of others among nursing students. Based on the significant reduction in the level of health of others, Bonferroni post-hoc analysis was carried out to identify which particular difference between pairs of means are significant. The mean difference of before and after phases was 7.52, before and follow-up was 12.00 which were statistically significant and after and follow-up was 4.48 which was statistically significant. The nursing students were taught with rationalising their professional work rather than crossing their limit as a health care professionals. Once they understood about their limit and boundary with the patients, the students felt, the right space which needs to be addressed between the nursing students and the patients.

Hence the Alternative Hypothesis 2.9, "There will be a significant difference in health of others among nursing students during before, after and follow-up without control group through Cognitive Behaviour Therapy Intervention", is accepted.

Figure 31

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Health of others.



The result of the overall aggression in the before, after, and follow-up phases of the participants is presented in figure 31. The graph indicates that after the intervention, the results of the students reduced noticeably. However, the follow-up results showed the aggression reduced even after the intervention stopped. Students' follow-up result shows that they know they have needed skills to be competent.

(x) Stress

The results of levels, descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in stress.

Table 45

Level of Stress among Nursing Students

N=150

Stress	Frequency	Percentage
Very High	4	3
High	8	5
Above Average	40	27
Average	24	16
Below Average	68	45
Low	6	4

Table 45 displays the frequency of level of overall stress of the nursing students. A total of 150 nursing students responded to the variable stress. Whereas, 4 percentage of the student population showed low level of overall stress. A majority of 45 percentages of the students below average level of stress among nursing students. Sixteen percent of the students secured average level of stress, however 27 percent of the nursing students interpreted as above average level of stress, and 5 percent of the students have scored as high level of stress. Finally, 3 percent of the students scored very high level of stress. The students who fall under very high, high and above average level of stress was taken into the study and they were exposed to intervention program.

Figure 32

Level of Stress among Nursing Students

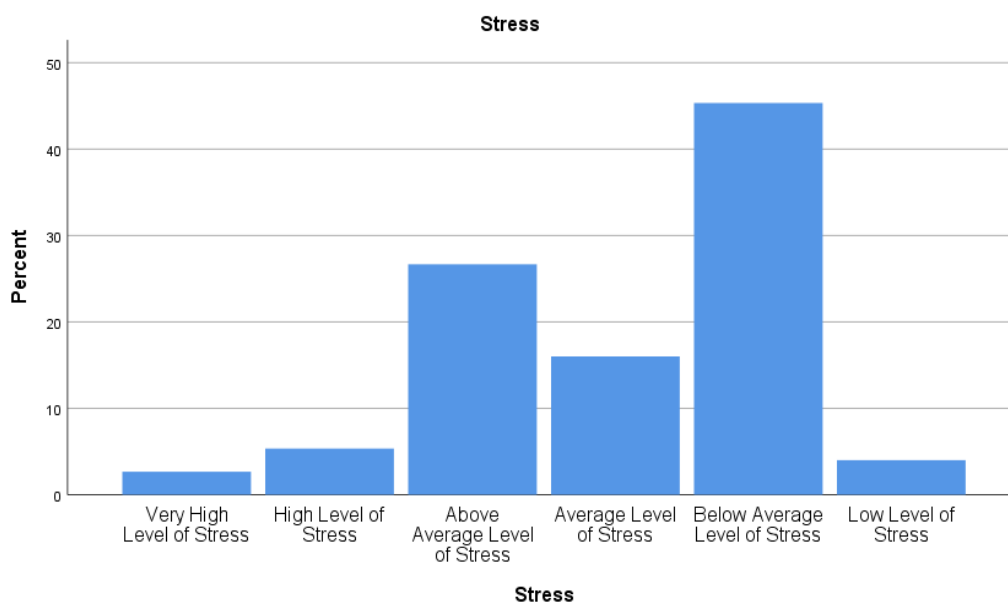


Table 46

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behaviour Therapy in Total Stress.

Variable	Groups	Phases	Mean	SD	N
Total Stress	Nursing Students	Before	297.73	36.63	52
		After	219.21	38.92	52
		Follow-up	169.65	28.99	52

Table 46 explains the descriptive statistics on stress of nursing students in before, after and follow-up phases. The mean score for stress before Cognitive Behaviour Therapy was 297.73, and it reduced to 219.21 after Cognitive Behaviour Therapy program and further reduced to 169.65 in the follow-up phase. This shows that the students who have undergone the Cognitive Behaviour Therapy found to be effective and useful in reducing their stress.

The students were well briefed about the nature of stress and both physiological and psychological changes occur when stressed. Once students understood about the causes of stress, they become more aware about the stress and its effects on both bodily and mental changes. Few techniques such as deep breathing, reverse counting, relaxing were taught along with prioritizing the stressful event. As few of stressful events cannot be neglected/avoided, students became well versed in handling those stressful events effectively.

Bryant, Moulds, and Nixon (2003) showed that treating stress during the initial stages would reduce the course or duration of long-term stress among people. Hence, it can be inferred that Cognitive Behaviour Therapy would help to reduce stress at its initial stages and sustain long-term duration.

Table 47

Repeated Measures ANOVA during before, after, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Total Stress.

N=52

Phases	Sum of Squares	df	Mean Square	F
Sphericity	433765.50	2	216882.75	508.82**
Assumed				
Greenhouse-Geisser	433765.50	1.53	283951.92	508.82**
Huynh-Feldt	433765.50	1.56	277127.08	508.82**
Lower-bound	433765.50	1.00	433765.50	508.82**

** - Significant at 0.01 level

Table 47 shows the results of Repeated Measures ANOVA for stress in before, after and follow-up phases among nursing 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 stress and sustained in the after and follow-up phases. The results reveals that Cognitive Behaviour Therapy had a significant impact in reducing the level of stress among nursing students.

The nursing students were exposed well to critically analyze over a stressful situation so that they develop the skill of eliminating the unwanted stressors which causes unwanted troubles. Learning this skill patterns helps the students to understand better about the existing problem and neglect the unwanted stressful events and plan a strategy for better outcomes.

Sharanavard, Esmaeili, Dastjerdi and Salehiniya (2018) done a study on the effectiveness of stress-management-based cognitive-behavioural treatments on stress management was highly effective whereas it also reduced other symptoms such as anxiety sensitivity.

Table 48

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in TotalStress

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Stress	Nursing Students	Before	After	78.52*	.000
			Follow-up	128.07*	.000
		After	Before	-78.52*	.000
			Follow-up	49.56*	.000
		Follow-up	Before	-128.07*	.000
			After	-49.56*	.000

*-Significant at 0.05 level

Table 48 shows the results of Post-hoc Analysis in the stress among nursing students. Based on the significant reduction in the level of stress, Bonferroni post-hoc analysis was carried out to identify which particular difference between pairs of means are significant. The mean difference of before and after phases was 78.52, before and follow-up was 128.07 which were statistically significant and after and follow-up was 49.56 which was statistically significant. The techniques such as relaxation therapy was found to be highly effective in reducing the level of stress among nursing students. The reverse counting method added credit in bringing back the normal psychological status of the nursing students. During heightened level of stress, the students were asked to blow a balloon and blast it, in order to let go the critical stressful situations.

Hence the Alternative Hypothesis 2, "There will be a significant difference in stress of nursing students during before, after and follow-up without control group through Cognitive Behaviour Therapy Interventions", is accepted.

Figure 33

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in \Stress



The result of the overall stress in the before, after, and follow-up phases of the participants is presented in figure 33. The graph indicates that after the intervention, the results of the students reduced noticeably. Also, the follow-up results showed the stress among nursing students was even more reduced even after the termination of Cognitive Behaviour Therapy programme.

SECTION VI

Achievement Motivation

The results of descriptive statistics, Repeated Measures ANOVA and Bonferroni Post-hoc Analysis of nursing students in before, after and follow-up phases of Cognitive Behaviour Therapy intervention in Achievement Motivation.

Table 49

Level of Achievement Motivation among Nursing Students

N=150

Achievement Motivation	Frequency	Percentage
Above Average	9	6
Average	64	43
Below Average	48	32
Low	23	15
Very Low	6	4

This table 49 shows the level of achievement motivation among nursing students. Achievement motivation is one of the basic components that every human inherited by nature. Motivation is a common phenomenon that every individual driven towards success of their life. Here among nursing students who have recorded in the categories of below average, low and very low level of achievement motivation were taken into the study and they were exposed to cognitive behaviour therapy and the same set of students were reassessed using the same set of psychological tools and reassessed. However, the students who have scored 43% which is average, 6% above average were not taken into the study.

Figure 34

Level of Achievement Motivation among Nursing Students

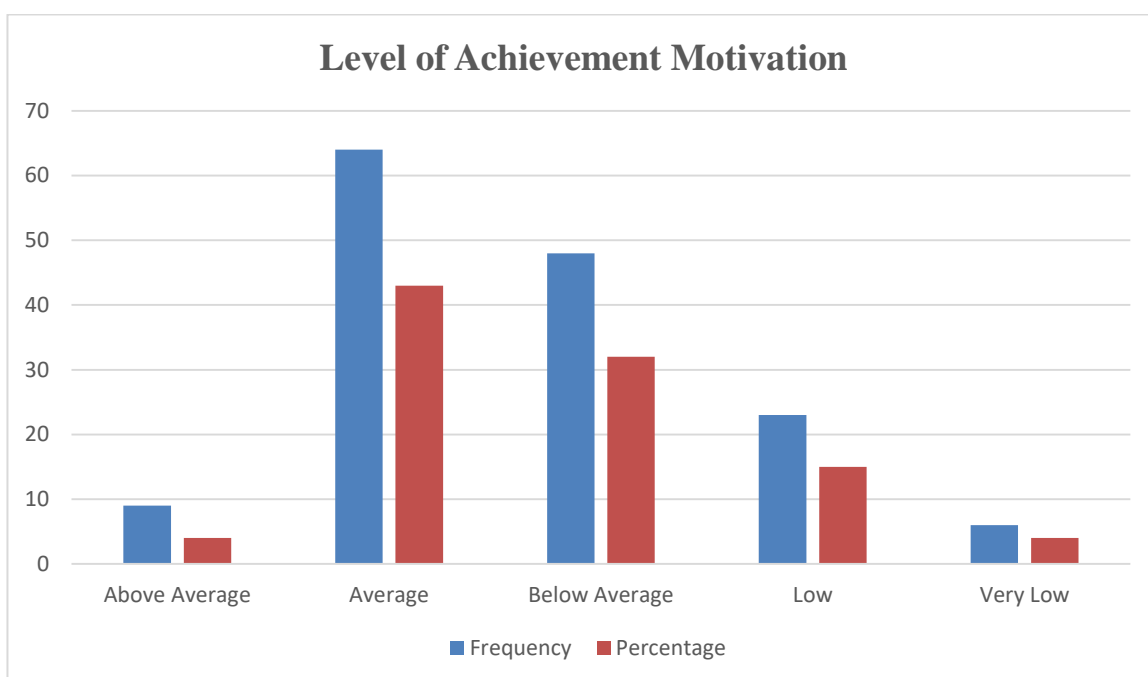


Table 50

Descriptive Statistics of Nursing Students during Before, After, and Follow-up phases of Cognitive Behavioural Therapy in Achievement Motivation

Variable	Groups	Phases	Mean	SD	N
Achievement	Nursing	Before	15.73	2.52	52
		After	21.85	1.38	52
		Follow-up	24.69	1.45	52
Motivation	Students				

Table 50 explains the descriptive statistics on achievement motivation of nursing students in before, after and follow-up phases. The mean score for achievement motivation before Cognitive Behaviour Therapy was 15.73, and it reduced to 21.85 after Cognitive Behaviour Therapy program and sustained to 24.69 in the follow-up phase. This shows that the students who have undergone the Cognitive Behaviour Therapy found to be effective and useful in enhancing achievement motivation among nursing students.

The techniques such as time management, feelings of failures, help was taught which acted as a base in understanding the basic cause and reasons behind failures. These techniques also help in strategy planning, few behavioural strategies in order to improve for better performances were taught to them. The technique feelings of failure was taught to them to experience the negative feelings attained despite the efforts made. These negative feelings help the students to gain knowledge and acquire more skills to show their talent in achieving their desired goals. Cognitive Behaviour Therapy along with self-determination helps to improve the achievement motivation of students especially the sophomores (Singh, James, Paul and Bolar, 2022).

Table 51

Repeated Measures ANOVA during Before, After, and Follow-up phases of Cognitive Behaviour Therapy on Nursing Students in Achievement Motivation.

N=52

Phases	Sum of Squares	Df	Mean Square	F
Sphericity Assumed	2180.66	2	1090.33	587.39**
Greenhouse-Geisser	2180.66	1.52	1431.19	587.39**
Huynh-Feldt	2180.66	1.56	1397.00	587.39**
Lower-bound	2180.66	1.00	2180.66	587.39**

** - Significant at 0.01 level

Table 51 demonstrates the results of Repeated Measures ANOVA for achievement motivation aggression in before, after and follow-up among nursing students and it clearly indicates the significant differences. The results showed that when compared to before Cognitive Behaviour Therapy program scores, there was a significant reduction in the level of achievement motivation was observed in after and follow-up phases of Cognitive Behaviour Therapy program.

The techniques such as achievement imagery, understanding the need of achievement, hope for success, success feelings, all these techniques involve for better shaping of the need for achievement motivation among nursing students. This method was very useful in shaping up their goal and leading a clear path to reach the goal. A study done by Murad (2021) states that Cognitive Behaviour Therapy helped to improve achievement motivation among university students. It includes the aspects such as problem-solving skills, time management acts as a catalyst in summing up the greater level of achievement motivation among students.

Table 52

Bonferroni Post-hoc analysis of before, after, and follow-up phases of Cognitive Behaviour Therapy among nursing students in Achievement Motivation.

N=52

Measure	Group	Phases	Phases	Mean Difference	Sig.
Achievement Motivation	Nursing Students	Before	After	-6.11*	.000
			Follow-up	-8.96*	.000
		After	Before	6.11*	.000
			Follow-up	-2.84*	.000
		Follow-up	Before	8.96*	.000
			After	2.84*	.000

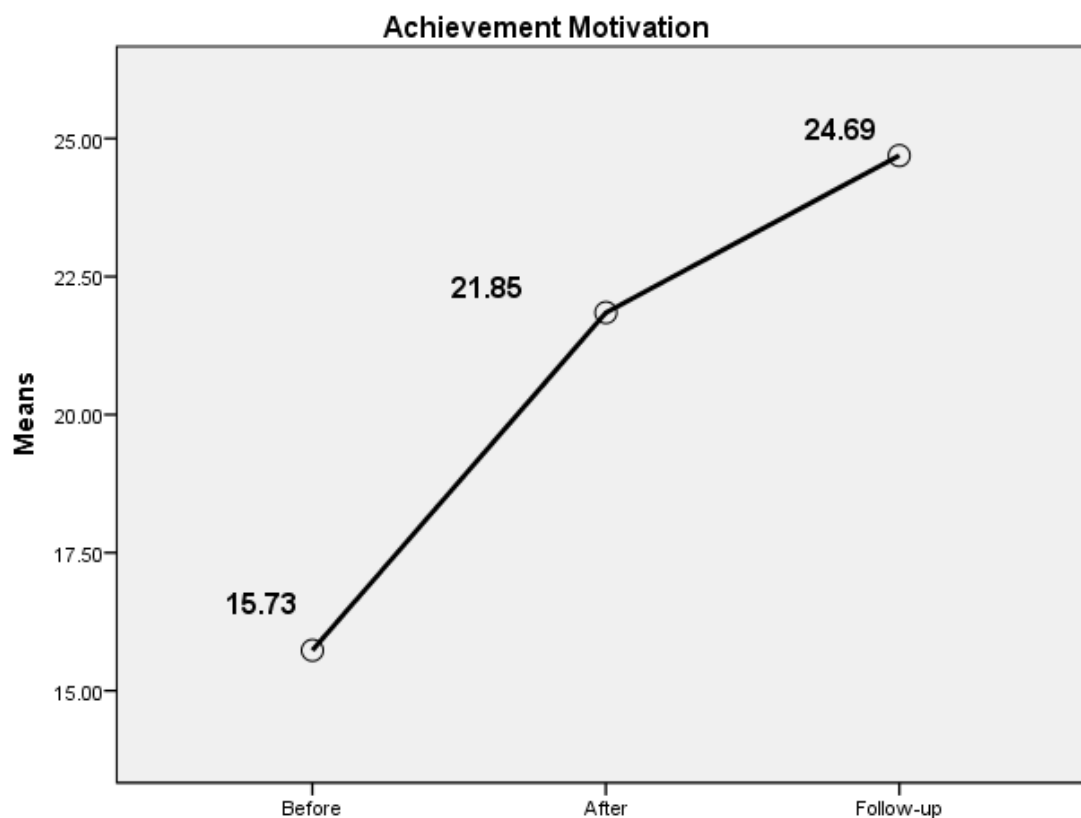
*-Significant at 0.05 level

Table 52 depicts the result of Post-hoc Analysis in achievement motivation of nursing students. Bonferroni post-hoc analysis was carried out to identify which particular differences between the pairs of the means are significant. The mean difference of before and after Cognitive Behaviour Therapy program was -6.11, before and follow-up phase was -8.96 which were statistically significant and after the program and follow-up score was 6.11 which was statistically significant. Henceforth, the overall achievement motivation of the students has been improved rapidly thus the techniques such as SWOT analysis, knowing the strength and weaknesses provided them a lot of information about their own abilities. The techniques of introspection was taught to them, thus the nursing students took this particular technique in a serious notion and done very critical self-evaluation. Therefore, CBT was way more effective in dealing with achievement motivation among nursing students.

Hence the Alternative Hypothesis 3, "There will be a significant enhancement in achievement motivation among nursing students during before, after and follow-up without control group through Cognitive Behaviour Therapy Interventions", is accepted.

Figure 35

Nursing Students during before, after and follow-up phases of Cognitive Behaviour Therapy in Achievement Motivation



The result of the overall achievement motivation in the before, after, and follow-up phases of the participants is presented in figure 35. The graph indicates that after the intervention, the results of the students improved noticeably both external and psychological aspects. The follow-up results showed the need for achievement motivation was even more sustained and increased comparatively even after the intervention training programme was once stopped. Students' follow-up result shows that they know they have needed skills to stay focused in achieving their aim and goal.