

A Comparative Study to Assess the Effectiveness of Laughter Therapy Versus Meditation on Stress and Anxiety among Nursing Students at Selected College, Bangalore

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Abstract

A Comparative Study To Assess The Effectiveness of Laughter Therapy Versus Meditation On Stress And Anxiety Among Nursing Students At Selected College, Bangalore.

Objectives:

1. To assess the effectiveness of laughter therapy on stress and anxiety among nursing students.
2. To assess the effectiveness of meditation on stress and anxiety among nursing students.
3. To compare the effectiveness of laughter therapy versus meditation on stress and anxiety among nursing students. The conceptual framework adopted for the study was based on Imogene King's goal attainment.

Sampling Technique: computer randomization method.

Sample size: 90 nursing students.

Method: A true experimental, pretest, posttest with control group design on anxiety and stress.

Result: Comparison of laughter therapy versus meditation theory (1981). The calculated F value within the group was 153.1 and between the groups was 100.56 which was found to be significant at 0.05 level of significance on anxiety among the nursing students. The calculated F value on stress among the nursing students was 17.50 within the group and 60.80 between the groups which was found to be significant at 0.05 level of significance. Therefore it is concluded that there was significant gain in reduction of anxiety and stress after meditation.

Keywords: Effectiveness, Meditation, Laughter Therapy, Anxiety, Stress, Nursing students.

Background

Nursing students are exposed to clinical area which is more stressful. Clinical sources of stress and anxiety includes fear of the unknown diseases, a new clinical environments, conflict between the ideal and real clinical practice, unfamiliarity with medical history, absence of professional nursing skills, unfamiliar patients diagnosis and treatments, providing physical, psychological and social care to patients, fear of making mistakes, giving medication to children and the death of a patient. It manifests by physical symptoms such as a racing heartbeat, sweating, trembling, and psychological symptoms such as restlessness, insomnia and difficulty in concentrating.¹ Laughter therapy and Meditation are

the effective tools for reducing stress and anxiety. It is a felt need of the investigator to reduce the anxiety and stress by comparing laughter therapy and meditation among the nursing students.²

Objectives

1. To assess the effectiveness of laughter therapy on stress and anxiety among nursing students.
2. To assess the effectiveness of meditation on stress and anxiety among nursing students.
3. To compare the effectiveness of laughter therapy versus meditation on stress and anxiety among nursing students.

Assumption

1. The increased level of stress and anxiety may hinder with student learning and development.
2. Students use certain coping mechanism to overcome stress and anxiety.

Hypothesis

H1: There will be a significant difference between pre and post laughter therapy of stress and anxiety score at 0.05 level of significance.

H2: There will be significant difference between pre and post meditation on stress and anxiety score at 0.05 level of significance.

H3: There will be significant difference in students' level of stress and anxiety between laughter therapy and meditation at 0.05 level of significance.

H4: There will be significant association between pretest score with selected baseline variables.

Delimitation

The study is delimited to

- Study is limited to only sample size of 90.
- The study is limited for a period of 6 weeks.

Material and Method

Research Design: True experimental design with pre-test post-test only design with control group.

| Group | Pretest | Treatment | Post test |
|-----------------------|---------|-----------|-----------|
| Experimental Group I | O1 | X1 | O2 |
| Experimental Group II | O1 | X2 | O2 |
| Control Group | O1 | | O2 |

The samples consisted of 90 nursing students was randomly selected by using computer randomization method out of which 30 students were attending laughter therapy, 30 students were attending meditation and 30 were in control group. Pre interventional anxiety and stress scores were assessed in all the three groups to determine the level of anxiety and stress by using Becks Anxiety Inventory Scale and Perceived stress scale respectively. The interventions were given separately to experimental I, experimental II and no intervention for control group and post intervention anxiety and stress scores were assessed on 5th, 10th& 15th days of each intervention and control group. The data obtained

were analyzed and interpreted using descriptive and inferential statistics.

Sampling Criteria

(A) Inclusion Criteria

- Nursing students who had high and very high level of stress & moderate and persistent high anxiety.
- Nursing students age below 30 years.
- Nursing students those who were pursuing G.N.M, B.Sc. and P.C. B.Sc.
- Nursing students who were unmarried.

(B) Exclusion criteria

- Nursing students who were on long leave.
- Nursing students who had practiced laughter therapy and meditation.
- Nursing student who had mental illness and on psychiatric drugs.

Description of Tool

Section A: Consisted of data on Baseline variables.

Section B: Consisted of the Becks Anxiety Inventory which was used to assess the anxiety levels.

Section C: Perceived Stress Scale which was used to assess the stress levels among the nursing students.

Finding

Section A: Assess the level of anxiety among the nursing students by using Becks Anxiety Inventory.

The nursing students who fit into inclusion criteria were selected for the study. Among them, 30 each were allotted to laughter therapy, meditation and control group. It was noted that prior to the intervention, majority 86.66% (26) in experimental I, 83.33% (25) in experimental II and 93.33% (28) in control group had moderate pre interventional anxiety score while 13.33% (4) in experimental I, 16.66% (5) and 6.66% (2) had severe anxiety by the using Becks Anxiety Inventory Scale.

Section B: Assess the level of stress among the nursing students by using Perceived Stress Scale.

Majority 73.3% (22) in experimental I, 43.33% (13) in experimental II and 33.33% (10) in control group

students had very high pre interventional stress score and 23.33% (8) in experimental I, 56.66% (17) and 66.66% (20) nursing students had high pre interventional score.

Section C: Assess the effectiveness on laughter therapy on anxiety and stress among the nursing students within the group using Becks anxiety Inventory scale and perceived stress scale.

The Becks Anxiety Inventory Scale the mean post interventional score of anxiety 16.86 was lower than the mean pre interventional score of 32.70 in which the calculated “t” value within the group was 17.54 which is significant.

By the Perceived Stress Scale the mean post interventional score of stress is 15.43 which was lower than the mean pre interventional score of 23.90 in which the calculated “t” value within the group was 9.05 which is significant.

Section D: Assess the effectiveness of laughter therapy on anxiety and stress among the nursing students between the groups by using Becks anxiety Inventory scale and perceived stress scale.

Table

| | Groups | Laughter therapy | | Mean difference | df | ‘t’ value |
|---------|----------------|------------------|-------|-----------------|----|-----------|
| | | Mean | SD | | | |
| Anxiety | Experimental I | 17.60 | ±4.27 | 14.60 | 1 | -12.225* |
| | Control | 32.20 | ±4.89 | | | |
| Stress | Experimental I | 15.43 | ±4.43 | 4.57 | 1 | -3.902* |
| | Control | 20.00 | ±4.63 | | | |

*= Significant

Section E: Effectiveness of meditation on stress and anxiety among the nursing students using becks anxiety inventory scale and perceived stress scale.

Table 1: Effectiveness of meditation on stress and anxiety within the groups using Becks anxiety Inventory scale and perceived stress scale. N=30

| | Test | Meditation | | t-test |
|---------|-----------|------------|-------|--------|
| | | Mean | SD | |
| Anxiety | Pretest | 31.80 | ±3.47 | 13.58* |
| | Post test | 16.86 | ±5.09 | |
| Stress | Pretest | 22.43 | ±3.22 | 13.55* |
| | Posttest | 11.90 | ±2.96 | |

*= Significance

Table 2: Effectiveness of meditation on stress and anxiety between the groups using Becks anxiety Inventory scale and perceived stress scale. N=60

| | Test | Meditation | | t-value |
|---------|-----------------|------------|-------|---------|
| | | Mean | SD | |
| Anxiety | Experimental II | 17.07 | ±5.19 | 11.45* |
| | Control | 32.26 | ±4.82 | |
| Stress | Experimental II | 11.48 | ±2.59 | 8.43* |
| | Control | 20.00 | ±4.63 | |

*= significance

Section D: Comparison of effectiveness of laughter therapy vs meditation on anxiety by using becks anxiety inventory scale among the nursing students.

Table 3: Comparison of scores across time and between the laughter therapy versus meditation on anxiety by using Becks Anxiety Inventory Scale

| Variables | | Assessment | | | | F-value | | α |
|-----------|---------|-----------------|------------------|------------------|-----------------|----------------|--------------|--------|
| | | Pre test | Post (5) | Post (10) | Post (15) | | | |
| | | Mean ± SD | | | | Between groups | Within group | |
| Anxiety | Exp I | 32.70 ±3.075 | 29.30 ±3.395 | 22.07, ± 3.64 | 17.60 ±4.272 | 100.567 * | 153.115 * | P<0.05 |
| | Exp II | 31.80 ±3.80 | 23.87 ± 3.478 | 20.63 ±3.873 | 16.87 ±5.090 | | | |
| | Control | 31.20 ±2.124 | 31.20 ±1.901 | 33.23 ±3.936 | 32.27 ±4.820 | | | |

* = Significance

Table 4: Comparison of effectiveness of laughter therapy vs meditation on stress by using perceived stress scale among the nursing students.

| Variables | | Assessment | | | | F- value | | α |
|-----------|---------|----------------------|----------------------|----------------------|---------------------|----------------|--------------|----------|
| | | Pre test | Post (5) | Post (10) | Post (15) | Between groups | Within group | |
| | | Mean \pm SD | | | | | | |
| Stress | Exp I | 23.90 \pm 3.977 | 19.13 \pm 3.569 | 18.47 \pm 4.659 | 15.43 \pm 4.43 | 17.503 * | 60.806 * | P<0.05 |
| | Exp II | 22.43 \pm 3.224 | 17.97 \pm 3.952 | 15.37 \pm 3.662 | 11.90 \pm 2.96 | | | |
| | Control | 20.43 \pm 3.936 | 21.77 \pm 3.002 | 20.60 \pm 2.978 | 20.00 \pm 4.63 | | | |

* = significance

Discussion

Analysis of level of anxiety and stress among the nursing students.

The nursing students who fit into inclusion criteria were selected for the study. Among them, 30 each were allotted to laughter therapy, meditation and control group. It was noted that prior to the intervention, majority 86.66% (26) in experimental I, 83.33% (25) in experimental II and 93.33% (28) in control group had moderate pre interventional anxiety score while 13.33% (4) in experimental I, 16.66% (5) and 6.66% (2) had severe anxiety by the using Becks Anxiety Inventory Scale.

Majority 73.3% (22) in experimental I, 43.33% (13) in experimental II and 33.33% (10) in control group students had very high pre interventional stress score and 23.33% (8) in experimental I, 56.66% (17) and 66.66% (20) nursing students had high pre interventional score.

While comparing the demographic characteristics of the two experimental groups and control group was found that they matched in all aspects.

Analysis of effectiveness of laughter therapy on anxiety and stress

The mean post interventional score of anxiety was 17.60 which was lower than the mean post interventional of 32.20 among the control group in which the calculated "t" value between the groups was -12.22 which was found to be significant at 0.05 level of significance.

The mean post interventional score of stress was 15.43 which was lower than the mean post interventional score of 20.00 among the control group in which the calculated "t" value between the groups was -3.902

(p value 0.000) which was found to be significant at 0.05 level of significance.

Analysis of effectiveness of meditation on anxiety and stress

The mean post interventional score of anxiety 16.86 was lower than the mean pre interventional score of 31.80 in which the calculated "t" value within the group was 13.58.

The mean post interventional score of stress was 11.90 which was lower than the mean pre interventional score of 22.43 in which the calculated "t" value within the group was 13.55.

Comparison of laughter therapy versus meditation on anxiety and stress

The comparison was concluded that the post mean score of experimental II (16.87) was lower than the post mean score of experimental I(17.60) which means that meditation was more effective in stress.

The comparison of experimental II (11.90) and experimental I (15.43) shows that there was a significant difference in anxiety score at 0.05 level of significance which means that meditation was more effective.

Hence, it was included that meditation is more effective in anxiety and stress compared to laughter therapy.

Conclusion

Stress is the body's reaction to various stimuli, including physical, chemical, emotional or environmental factors.³ Laughter lightens the burdens, inspires hopes,

connects to others and keeps alert. Laughter is linked with the activation of the ventromedial prefrontal cortex which produces endorphins suppresses stress hormones.² Nursing education is one of the main disciplines in India. The nursing education has long been perceived that nursing students experience higher levels of stress than other students. The effects could be reflected in student's social, mental health and academic performance.⁶ Meditation is also another relaxation technique that can reduce stress and anxiety. Meditation is mind and body practice that has used for increasing calmness and physical relaxation, improving psychological balance, coping with illness, and enhancing overall health and well-being.⁵

The present study compares the effectiveness of laughter therapy versus meditation in reduction of anxiety and stress among the nursing students by using Becks Anxiety Inventory Scale and Perceived Stress Scale. About 90 nursing students were randomly selected using computer randomization method out of which 30 students were attending laughter therapy, 30 students were attending meditation and 30 were in control group. Pre interventional anxiety and stress scores were assessed in all the three groups to determine the level of anxiety and stress by using Becks Anxiety Inventory Scale and Perceived stress scale. The interventions were given separately to experimental I, experimental II and no intervention for control group and post intervention anxiety and stress scores were assessed after each intervention. The present study concludes that meditation is more effective than laughter therapy in stress and anxiety among the nursing students.

Conflict of Interest: None

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Ethical Clearance: Obtained from the concerned institution.

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