



EFFECTIVENESS OF PLANNED NURSING INTERVENTION ON BREATHING EXERCISE IN TERMS OF LEVEL OF EXAMINATION STRESS AMONG I YEAR BSC NURSING STUDENTS

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ABSTRACT:

The purpose of this study was to evaluate the effectiveness of Breathing Exercise to reducing examination stress among I year BSc Nursing students in a selected college at Salem. **Method:** A quantitative, evaluative approach and quasi-experimental (one group only pretest – post-test) research design was used. A sample of 60 students was selected from the selected College of Nursing at Salem, using a non-probability convenient sampling technique. The tool used to assess the level of examination stress is a four-point rating scale, which consists of psychological and physiological symptoms, after demonstrating the Breathing Exercise followed by a post-test was conducted to assess the reduced level of examination stress. **Findings:** The findings showed that the mean post-test examination stress score of 24.65 was lower than the mean pre-test examination stress score of 51.55 among the samples. There was a significant association between the mean pre-test score of examination stress and their selected demographic variables such as extracurricular activities and the medium of the language studied. In this study, the researcher used four types of Breathing Exercises such as alternate breathing, equal breathing, chest breathing, and nose-mouth breathing. **Conclusion:** The Breathing Exercise was effective to reducing the examination stress among I year BSc Nursing students.

Key words: Planned nursing intervention, Breathing Exercise Examination stress, Nursing Students, college, cope

I. INTRODUCTION

The word 'stress' is described by the oxford dictionary as a "state of affairs involving demand on physical or mental energy". A condition or circumstance (not perpetually adverse), which may disturb the traditional physiological and psychological functioning of a person. In the medical idiom 'stress' is outlined as a perturbation of the body's physiological condition. Extreme conditions square measure prejudicious to human health; however, sparse stress is traditional and, in several cases, proves helpful. (Sreevani,2016)

The professional preparation of a nurse in the institute of nursing is largely determined by her initial adjustment and ability to cope with changes necessary for his/her academic preparation.

Nursing college students are a treasured human resource. Detection of ability strain among nursing college students is vital because the strain can cause low productiveness low great of lifestyles and suicidal ideas. Identifying elements affecting strain amongst nursing college students can assist nursing educators to discovering methods to lower strain. (Lindsay 2012)

Learning to deal with stress may be a helpful ability for a nursing career and life ahead. By setting priorities, designing ahead and organizing the self, one will minimize the impact of stress. Therefore, this study was conducted to assess the issues due to stress by recently admitted basic B.Sc. nursing students

Statement of the Problem

"A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED NURSING INTERVENTION ON BREATHING EXERCISE IN TERMS OF LEVEL OF EXMINATION STRESS AMONG I YEAR BSC NURSING STUDENTS IN A SELECTED COLLEE AT SALEM". TAMILNADU. INDIA

OBJECTIVES OF THE STUDY

1. To assess and compare pre-test and post-test scores on the level of examination stress among the samples.
2. To find an association between the pre-test level of examination stress among the samples with that selected demographic variables such as ordinal position in the family, extracurricular activities and medium of language studied in the 12th standard.

1.4 RESEARCH HYPOTHESIS

H_1 – The mean post -test score of students will be significantly lower than the mean pre-test stress score on examination stress among the samples.

H_2 – There is a significant association between the pre-test examination stress score of samples and their selected demographic variables.

II.METHODOLOGY

Research Design: The design adopted for the present study was a quasi -experimental one - group pre test - post test design.

Independent Variable: Planned Nursing Intervention on breathing exercise.

Dependent Variable: In this study, the dependent variable refers to the level of examination stress among I- year B.Sc. Nursing students.

Population: In this present study population were all students studying in selected College of Nursing, Salem for the academic year 2017-2018, appearing for the university examination.

Sample: In this study, the sample was selected from I year B.Sc. Nursing students studying at the selected College of Nursing, Salem

Sampling Technique: In this study, a non-probability convenient sampling technique was used to select the samples.

Sample size: The Sample size in this study was 60.

Development of Data Collection Instrument: The tool was organised into following sections

Tool-I: Demographic Variables

This section deals with the demographic data that were used to collect the characteristics of the samples. It contains age, sex, religion, ordinal position, type of family, extracurricular activities, and medium of the language studied in the 12th standard.

Tool-II: Rating scale to assess the level of examination stress among I year BSc Nursing students.

The examination stress checklist comprises 30 items such as psychological aspects and physiological aspects regarding examination stress. Each item has 4 alternatives among this low score is 0 and the high score is 3. The total score was 90. Based on the percentage of scores, the stress level was interpreted as 0-29 as mild stress score, 30-59 as moderate stress score, and 60-90 as severe stress score.

Data collection method:

The data were collected after obtaining formal permission from the concerned authorities; the main study was conducted in the Shanmuga College of Nursing, Salem. The samples were selected by a convenient sample technique. The samples were selected based on the inclusion and exclusion criteria. The sample size is 60.

On day one, the researcher gave instructions to all the samples to gather in the classroom. In the evening, all 60 samples were gathered in the first-year classroom. Then distribute the tool to all the samples. The tool contains demographic variables and a four-point rating scale to assess the examination stress of the first-year BSc Nursing students who are going to attend the University examination. Then read the general instruction to fill the questionnaire. The tool was filled by the samples by the self-administered method. They answered every question within 20 – 30 minutes.

After that session, on the same day planned nursing intervention, i.e. breathing exercise is taught to the students by the demonstration method. From that day onwards, they have practiced the breathing exercise for 30 minutes for 28 days. After four weeks, the post-test was conducted using the same examination stress rating scale.

III. DATA ANALYSIS AND INTERPRETATION

Section-I: Description of the Demographic Variables of Samples.

This section shows the analysis of demographic variables of the samples according to the frequency and percentage distribution, which includes age, sex, religion, and ordinal position in the family, type of family, extracurricular activities participated, and the medium of language studied in the 12th standard.

Table – 1: Frequency and percentage distribution of samples according to their demographic variables.

n=60

SI No:	Demographic variables	Frequency (f)	Percentage (%)
1.	Age (in years)		
a)	≤ 17	0	0 %
b)	18	35	58.3 %
c)	19	23	38.3 %
d)	≥20	2	3.33 %
2.	Sex		
a)	Male	15	25 %
b)	Female	45	75 %
3.	Religion		
a)	Hindu	39	65 %
b)	Christian	20	33.3 %
c)	Muslim	1	1.6 %
4.	Ordinal position in the family		
a)	First child	31	51.6 %
b)	Middle child	8	13.33 %
c)	Last child	21	35 %
d)	Only child	1	1.6 %
5.	Type of family		
a)	Nuclear family	43	71.6 %
b)	Joint family	16	26.6 %
c)	Extended family	1	1.6 %
6.	Which extracurricular activity you participated more		
a)	Sports	14	23.3 %
b)	Dance	14	23.3 %
c)	Painting	6	10 %
d)	No activities	26	43 %

7.	Medium of language studied in 12th standard		
a)	English	25	41.6 %
b)	Tamil	30	50 %
c)	Malayalam	5	8.3 %
d)	Other languages	0	0 %

Table 1 shows that in the samples, the majority of 35 (58.3%) were in the age group of 18 years. 23 (38.3%) were in the age group of 19 years. 2(3.33%) were in the age group of > 20 years and no one in the age group below 17 years.

The majority of students who participated in the study were females 45(75%) and only 15(25%) were only male.

In the religious aspect, the majority were Hindus, 39(65%) and 20(33.3%) were Christians and only 1(1.6%) were from the Muslim community.

When analyzing the ordinal position of samples in their family most of the students came under first child 31(51.6%). Then the second most come under the last child 21(35%). 8 students were middle children and only one child was 1(1.6%).

When coming to a type of family, the majority are from nuclear family 43(71.6%), then 16(26.6%) from the joint family and only 1(1.6%) from the extended family.

The majority of 26(43%) of students have no extracurricular activities. 14(23.3%) students each have participated in sports and dance and 6(10%) students were interested in painting.

With regard to the medium of the language studied in the 12th standard, most of the samples were from Tamil medium 30(50%). Then, 25(41.6%) were studied in the English medium. 5(8.3%) were studied in Malayalam medium and no one studied other than these three languages.

Section–II: Analysis of pre test and post test level of examination stress score among I year BSc Nursing students.

This section deals with the details of analysis with regard to mean the pre test and mean post test score percentage on examination stress score among I year B.Sc Nursing students.

Figure -1.Bar Diagram shows the percentagewise distribution of sample and Their level of examination stress.

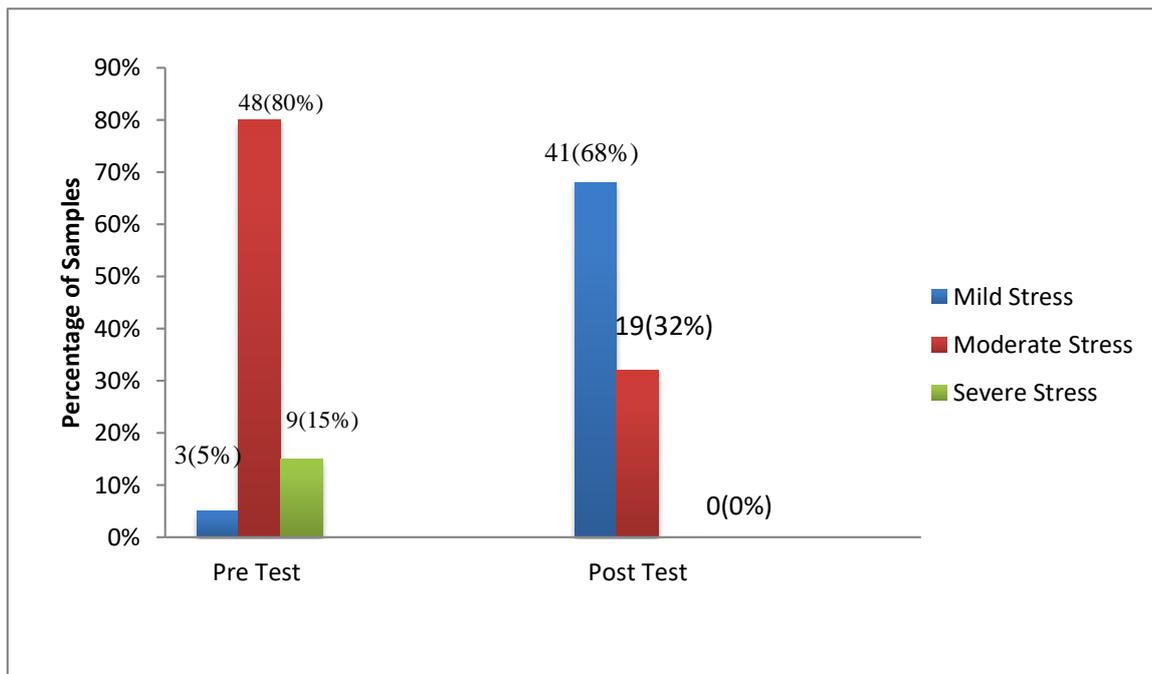


Figure – 1 depicts that during the pre test, 3(5%) of samples were under mild stress, 48(80%) of samples were in moderate stress and 9(15%) of samples were under severe stress. In the post test, 41(68%) samples were under mild stress, 19(32%) of samples were in moderate stress, and no samples (0%) were under severe stress.

SECTION – III Compare the mean pre test examination stress score and mean post test examination stress score among the samples.

In this section mean, standard deviation, range, mean percentage and paired ‘t’ value of scores of examination stress score among the samples were analyzed. Hypotheses H_1 will be tested to find out the significance at $p < 0.05$ level.

Hypothesis H1: The mean post test score of students will be significantly lower than the mean pre test stress score on examination stress among the samples.

Null hypotheses $H_{0(1)}$: There is no significant difference between the mean pre -test and post test stress scores on examination stress among the samples.

In order to test the hypothesis, the researcher used the paired 't' test. Table 2 shows the findings.

Table - 2: Mean, standard deviation, range, mean percentage, and paired 't' value of scores on the examination stress among I year BSc Nursing students.

n=60

Sl no:	Test	Max possible score	Mean	SD	Range	Mean %	Paired 't' test value
1	Pre test	90	51.55	10.03	24-70	57.27%	7.8
2	Post test	90	24.65	9.87	0-45	27.38%	

Significance at $p < 0.05$ level; $t_{59}=2.02$; $df=59$.

Table – 2 shows that the mean post-test examination score (24.65) was less than the mean pre-test examination score (51.55). The mean difference between pre-test and post-test examination stress score was 26.90. The paired 't' value (7.8) is greater than the table value (2.02) at 0.05 level of significance. Hence research hypotheses H_1 is accepted and null hypotheses $H_{0(1)}$ is not accepted.

This indicated that breathing exercise was effective to reducing the level of examination stress among samples.

Section - IV: Item Wise Analysis and Comparison of Pre Test and Post Test Examination Stress Score Among I Year Bsc Nursing Students.

Table – 3 Item wise distribution of data.

n=60

Sl No:	Items	Pre test				Posttest			
		Never	Some times	Often	Very Often	Never	Some times	Often	Very Often
1.	I feel tensed or nervous when thinking about examination.	0	19	23	18	18	22	15	5
2.	I am scared for preparing for examination	5	18	23	14	13	31	11	5
3.	I usually thought about the consequences of failing an examination.	3	21	20	16	24	22	10	4
4.	I become irritated soon	3	28	15	14	12	24	19	5
5.	I worry so much before a major examination that I cannot do my level best	2	23	23	12	15	23	17	5
6.	I feel that I am developing forgetfulness	4	20	21	15	18	26	12	4
7.	I have difficulty in concentrating while preparing for examination	2	25	17	16	17	29	10	4
8.	I have nightmares of frightening dreams during sleep time	10	25	17	8	26	23	8	3
9.	I feel daydreaming is more during exam preparation	9	18	21	12	26	25	7	2
10.	I feel sad frequently during exam preparation	6	21	22	11	16	33	9	2
11.	I get nervous when I forget things that I knew	2	20	27	11	21	23	13	3
12.	I cannot prepare well for my examination so I wishes to post	5	18	20	17	22	27	6	5

	pone the examination								
13.	I am feeling blank when examination thoughts come	2	19	15	24	23	24	10	3
14.	I cannot find time to have fun to enjoy myself	12	24	16	8	25	23	9	3
15.	I find myself reading without understanding	8	26	16	10	20	30	9	1
16.	I feel that exam stress affect my daily life	4	16	24	16	28	23	4	5
17.	I experience mood swings and difficulty in making decisions	6	23	16	15	19	31	9	1
18.	I used to self-criticize during exam time	2	17	26	15	23	31	5	1
19.	I cannot think well as before	7	18	26	9	25	26	7	2
20.	I have habit of biting nails because of exam stress	14	8	25	13	34	20	4	2
21.	I experience heart burns during exam preparations	0	27	13	20	21	33	5	1
22.	I feel headache during exam preparation	8	16	18	18	23	30	4	3
23.	I am having dark wrinkles around my eyes	6	20	21	13	24	27	7	2
24.	I experience loss of appetite	5	15	20	20	26	28	5	1
25.	I experience tension or tightness in the neck, back of jaw	8	20	14	18	24	24	10	2
26.	I have loose stools or constipation	13	17	18	12	34	22	2	2
27.	I have excessive sweating sometimes	4	23	21	12	31	27	2	0
28.	I have vomiting sensations	8	15	12	15	35	23	2	0
29.	I experience frequent passing of urine due to exam stress	6	15	20	19	36	23	1	0

30.	I am tired and fatigue when worrying about examination	3	19	13	25	30	28	0	2
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In regards to item no:1, “I feel tensed or nervous when thinking about exams”, in the pre-test majority of the students answered often 23(38.3%). In the post-test majority answered sometimes 22(36%). There was a significant difference between the pre-test and post-test.

In regards to item no:2, “I am scared for preparing for examination”, in the pre-test majority of the students answered often 23 (38.3%). In the post-test majority answered sometimes 31(51.6%). There was a significant difference between pre test and post test.

In regard to item no:3 “I usually thought about the consequence of failing an examination”, in the pre-test majority of students answered sometimes 21(35%). In the post-test, the majority answered never 24(40%). There was a significant difference between the pre-test and post-test.

In regard to item no:4, “I become irritated soon”, in the pre-test majority of students answered sometimes 28(46.6%). In the post-test majority answered sometimes 24(40%). There was no significant difference between the pre-test and post-test.

In regard to item no:5, “I worry so much before a major exam that I cannot do my level best”, in the pre-test majority of students answered sometimes and often 23(38.3%). In the post-test majority answered sometimes 23(38.3%). There was no significant difference between the pre-test and post-test.

In regard to item no:6, “I feel that I am developing forgetfulness”, in the pre-test majority of students answered often 21(35%). In the post-test majority answered sometimes 26(43.3%). There was a significant difference between the pre-test and post-test.

In regard to item no:7 “I have difficulty in concentrating while preparing for examination”, in the pre-test majority of students answered sometimes 25(41.6%). In the post-test, the majority answered sometimes 29(48.3%). There was no significant difference between the pre-test and post-test.

In regard to item no:8, “I have nightmares of frightening dreams during sleep time”, in the pre-test majority of students answered sometimes 25(41.6%). In the post-test majority answered never 26(43.3%). There was a significant difference between the pre-test and post-test.

In regard to item no:9, “I feel daydreaming is more during exam preparation”, in the pre-test majority of students answered often 21(35%). In the post-test majority answered never 26(43.3%). There was a significant difference between the pre-test and post-test.

In regard to item no:10 “I feel sad frequently during exam preparation”, in the pre-test majority of students answered often 22(36.6%). In the post-test, the majority answered sometimes 33(55.5%). There was a significant difference between the pre-test and post-test.

In regard to item no:11 “I get nervous when I forget things that I knew” in the pre-test majority of students often answered 27(45%). In the post-test, the majority answered sometimes 23(38.3%). There was a significant difference between the pre-test and post-test.

In regard to item no:12 “I cannot prepare well for my examination so I wish to postpone the examinations”, in the pre-test majority of students answered often 20(33.3%). In post-test, the majority answered sometimes 27(45%). There was a significant difference between pre test and post test.

In regard to item no:13 “I am feeling blank when examination thought comes”, in the pre-test majority of students answered very often 24(40%). In the post-test majority answered sometimes 23(38.3%). There was a significant difference between the pre-test and post-test.

In regards to item no:14 “I cannot find time to have fun to enjoy myself”, in the pre-test majority of students answered sometimes 24(40%). In the post-test, the majority answered never 25(41.6%). There was a significant difference between the pre-test and post-test.

In regard to item no:15 “I find myself reading without understanding”, in the pre-test majority of students answered sometimes 26(43.3%). In the post-test majority answered sometimes 30(50%). There was no significant difference between the pre-test and post-test.

In regard to item no:16 “I feel that examination stress affects my daily life”, in the pre-test majority of students answered often 24(40%). In the post-test, the majority answered never 28(46.6%). There was a significant difference between the pre-test and post-test.

In regard to item no:17 “I experience mood swings and difficulty in making decisions”, in the pre-test majority of students answered sometimes 23(38.3%). In the post-test majority answered sometimes 31(51.6%). There was no significant difference between the pre-test and post-test.

In regard to item no:18 “I used to self-criticize during exam preparation”, in the pre-test majority of students answered often 26(43.3%). In the post-test majority answered sometimes 31(51.6%). There was a significant difference between the pre-test and post-test.

In regards to item no:19 “I cannot think well as before”, in the pre-test majority of students answered often 26(43.3%). In the post-test, the majority answered sometimes 26(43.3%). There was a significant difference between the pre-test and post-test.

In regard to item no:20 “I have a habit of biting nails because of examination stress”, in the pre-test majority of students answered often 25(41.6%). In the post-test majority answered never 34(56.6%). There was a significant difference between the pre-test and post-test.

In regard to item no:21 “I experienced heart burning during exam preparation”, in the pre-test majority of students answered often and very often 18(30%). In post-test, the majority answered sometimes 30(50%). There was a significant difference between the pre-test and post-test.

In regard to item no:22 “I feel headache during exam preparation”, in the pre-test majority of students answered often and very often 18(30%). In the post-test majority answered sometimes 30(50%). There was a significant difference between the pre-test and post-test.

In regard to item no:23 “I am having dark wrinkles around my eyes”, in the pre-test majority of students answered often 21(35%). In post-test, the majority answered sometimes 27(45%). There was a significant difference between the pre-test and post-test.

In regard to item no:24 “I experience loss of appetite”, in the pre-test majority of students answered often and very often 20(33.3%). In the post-test majority answered sometimes 28(46.6%). There was a significant difference between the pre-test and post-test.

In regard to item no:25 “I experience tension or tightness in the neck, back of jaw”, in the pre-test majority of students answered sometimes 20(33.3%). In the post-test, the majority

answered never, and sometimes 24(40%). There was a significant difference between the pre-test and post-test.

In regards to item no:26 “I have loose stools or constipation”, in the pre-test majority of students answered often 18(30%). In the post-test majority answered sometimes 34(56.6%). There was a significant difference between the pre-test and post-test.

In regard to item no:27 “I have excessive sweating sometimes”, in the pre-test majority of students answered sometimes 23(38.3%). In the post-test, the majority answered never 31 (51.6%). There was a significant difference between the pre-test and post-test.

In regard to item no:28 “I have vomiting sensation”, in the pre-test majority of students answered never 18(30%). In the post-test majority answered never 35(58.3%). There was no significant difference between the pre-test and post-test.

In regard to item no:29 “I experiences frequent passing of urine due to examination stress”, in the pre-test majority of students often answered 20(33.3%). In the post-test, the majority answered sometimes 23(38.3%). There was a significant difference between the pre-test and post-test.

In regard to item no:30 “I am tired and fatigued when worrying about the exam”, in the pre-test majority of students answered very often 25(41.6%). In the post-test majority answered never 30(50%). There was a significant difference between pre-test and post-test



Section- IV: association of selected demographic variables with mean pre test examination stress score among I year BSC nursing students.

This section deals with the association of the mean pre test level of examination stress among the samples and their selected demographic variables. It was associated using the chi-square test and the results were observed.

Table – 4. Chi-square value for selected demographic variables (ordinal position in the family, extracurricular activities, medium of language studied in 12th std) and pre test level of examination score.

n=60

Sl no:	Demographic variables	Degree of freedom	Chi-square value	Table value	Significance
1	Ordinal position in the family	6	11.7	12.59	NS
2	Extracurricular activities	6	46.1	12.59	S
3	Medium of language studied	6	56.58	12.59	S

Level of significance = $p < 0.05$; S- Significant; NS- Not significant.

The data in Table 4 shows that the calculated chi square value (11.9) was lesser than the table value (12.59). This indicates that there is no significant association between the examination stress level and ordinal position in their family.

Data presented in the table – 4 depicts that the calculated chi-square value (46.1) was greater than the table value (12.59), indicates that there was a significant association between the mean pre test examination stress score and their extracurricular activities.

Data presented in the table – 4.4 depicts that the calculated chi-square value (56.58) was greater than the table value (12.59), indicates that there was a significant association between the mean pre test examination stress score and their medium of language studied in 12th standard.

IV. CONCLUSION:

From these study findings, it can be concluded that the breathing exercise was effective to reducing the level of examination stress among I year BSc nursing students and also have significance with demographic variables such as extracurricular activities and medium of the language studied in the 12th standard.

V. LIMITATIONS:

1. The study was limited to a single group, selected only one college of nursing.
2. Group is a small, generalization not possible.
3. Follow up not done for breathing exercise after the post-test.

VI. RECOMMENDATIONS:

Based on the findings of the present study, recommendations offered for future research are,

1. A similar study can be conducted in large sample size and with the different target populations.
2. A study can be conducted using other meditation or yoga
3. A similar study can be conducted on other stresses that students generally encounter during their college life.

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