

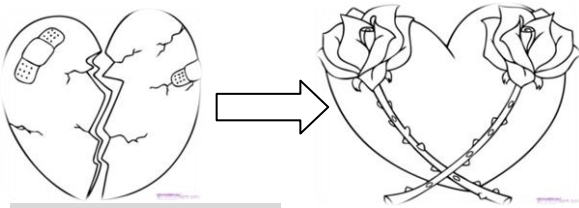
# Effectiveness of deep breathing exercise on the level of anxiety among the family members of patients admitted with cardiac disorders.

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**Problem Statement** 'Effectiveness of deep breathing exercise on the level of anxiety among the family members of patients admitted with cardiac disorders in selected hospitals of Pune.'

## **Objectives of the study**

1. To assess the level of anxiety among the family members of patients with cardiac disorders before administration and after administration of deep breathing exercise.
2. To compare the level of anxiety among experimental group and control group.
3. To find out the association between the scores and the demographic variables.



This study was based on quasi experimental (quantitative) approach. The population was the family members of patients with cardiac disorders. Total 60 samples (30 experimental and 30 control) were selected as per the inclusion criteria.. The sampling technique used in the study was non-probability convenient sampling. The tool was modified self evaluation questionnaire based on Spielbergers State Anxiety Inventory scale, and Checklist for assessment of anxiety.

In order to obtain content validity, the tool was given to a total 12 experts 10 experts from Medical Surgical Nursing, 1 expert from department of Mental Health Nursing, and 1 from the bio-statistician. After receiving the opinion from the experts some modifications were done in framing of the items and same were incorporated into the tool.

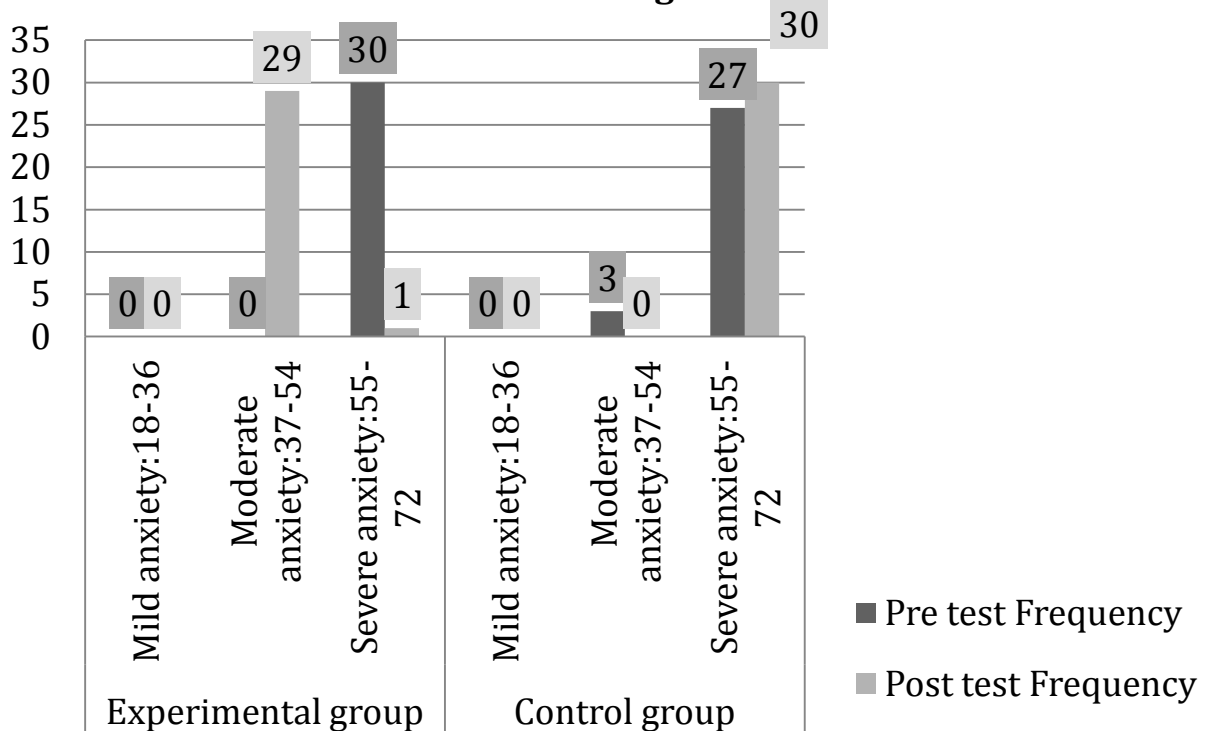
The pilot study was conducted in in selected hospitals of Pune.6 samples were selected (3 for experimental group and 3 for control group) by Non-Probability Convenient sampling technique, based on the inclusion criteria from 7<sup>th</sup> Dec. 2012 to 11<sup>th</sup> Dec. 2012, to assess the feasibility of the study and to decide the statistical analysis and practicability of research.

The data gathering process began from 18<sup>th</sup> Dec. 2012 to 22<sup>nd</sup> Dec. 2012. A formal permission was obtained from the concerned authorities. The family members of patient admitted with cardiac disorders in selected hospitals of Pune, who fit in the inclusion criteria were selected .The investigator introduced self and informed the samples about the nature of the study so as to ensure better co-operation during the data collection. Objectives of study were discussed and consent was obtained for participating in study. Subjects were assured about the confidentiality of the data. The necessary information was collected by interview technique using Modified self evaluation questionnaire based on Spielbergers State Anxiety Inventory scale, and Checklist for assessment of anxiety.

**Table 15.1 Analysis of data related to level of anxiety among the family members of patients with cardiac disorders before and after deep breathing exercise: N=60**

Group	Anxiety level	Pre test		Post test	
		Frequency	Percentage	Frequency	Percentage
Experimental group	Mild anxiety:18-36	0	0.0%	0	0.0%
	Moderate anxiety:37-54	0	0.0%	29	96.7%
	Severe anxiety:55-72	30	100.0%	1	3.3%
Control group	Mild anxiety:18-36	0	0.0%	0	0.0%
	Moderate anxiety:37-54	3	10.0%	0	0.0%
	Severe anxiety:55-72	27	90.0%	30	100.0%

**Fig.: 15.1 level of anxiety among the family members of patients with cardiac disorders before and after deep breathing exercise**



In experimental group, all of the relatives had severe anxiety (score 55-72) in pretest, whereas in posttest, majority of 96.7% of them had moderate anxiety (score 37-54) based on Spielberger's State Anxiety Inventory scale and only 3.3% of them had severe anxiety. In control group, 90% of the relatives had severe anxiety

(Score 55-72) and 10% of them had moderate anxiety (score 37-54) in pretest, whereas in posttest, all of them had severe anxiety (score 55-72). This indicates that the deep breathing exercises reduce level of anxiety of the relatives of patients with cardiac disorders.

*Table 15.2 Two sample t-test for comparison of experimental and control group anxiety based on Modified self evaluation questionnaire based on Spielbergers State Anxiety Inventory scale: N=60*

Group	Mean	SD	T	Df	p-value
Experimental	18.0	4.3	17.5	58	0.000
Control	-3.7	5.2			

Researcher applied two sample t-test for comparison of experimental and control groups. The two series compared are the effects on anxiety scores (pretest-posttest) for the corresponding groups. T value was found to be 17.5 at 58 degrees of freedom. Corresponding p-value is 0.000 is small (less than 0.05), null hypothesis was rejected. This indicates that the deep breathing exercises improve anxiety of relatives of patients of cardiac disorders. Also, the mean effect of the experimental group is 18 and that of the control group is -3.7. Thus, the anxiety of experimental group shows significant improvement after deep breathing exercises, whereas the anxiety worsens for control group.

In experimental group, majority (86.7%) of the relatives had severe anxiety (score 10-14) and 13.3% of them had moderate anxiety (score 5-9) in pretest, whereas in posttest, majority of 73.3% of them had moderate anxiety (score 5-9) based on checklist and 26.7% of them had mild anxiety (score 0-4). In control group, 86.7% of the relatives had severe anxiety (Score 10-14) and 13.3% of them had moderate anxiety (score 5-9) in pretest, whereas in posttest, all of them had severe anxiety (score 10-14). This indicates that the deep breathing exercises improve anxiety of the relatives of patients with cardiac disorders.

Researcher applied two sample t-test for comparison of experimental and control groups. The two series compared are the effects on anxiety scores (posttest-pretest) for the corresponding groups. T value was

found to be 18.2 at 58 degrees of freedom. Since corresponding p-value is 0.000 is small (less than 0.05), null hypothesis was rejected. This indicates that the deep breathing exercises improve anxiety of relatives of patients of cardiac disorders. Also, the mean effect of the experimental group is 5.9 and that of the control group is -2. Thus, the anxiety of experimental group shows significant improvement after deep breathing exercises, whereas the anxiety worsens for control group.

**Conclusion**

The deep breathing exercise significantly brought out improvement in the level of anxiety among the family members of patient admitted with cardiac disorders in selected hospitals of Pune. Analysis of data showed that there was significant difference between pre-test and post-test anxiety level.

**References**

1. Leher, Woolfolk & Sime (eds.) 2007, Smith, Jonathan C. "Ch. 3: The Psychology of Relaxation". pp. 46-7
2. Smith, Jonathan C. (2007). "Ch. 3: The Psychology of Relaxation". In Lehrer, Paul M.; Woolfolk, Robert L.; Sime, Wesley E. Principles and Practice of Stress Management (3rd ed.). p. 38
3. Mayo Clinic Staff (July 21, 2012). "Exercise and stress: Get moving to combat stress". mayoclinic.com Mayo Foundation for Medical Education and Research.
4. Goleman, Daniel (May 13, 1986). "Relaxation: Surprising benefits detected". The New York Times. Retrieved May 23, 2006.
5. Borchard, T. (2013). 3 Deep Breathing Exercises to Reduce Anxiety. Psych Central. Retrieved on August 20, 2014, from <http://psychcentral.com/blog/archives/2013/07/22/reduce-your-anxiety-this-minute-3-different-types-of-deep-breathing>.

