Self Instructional Module of Breathing Exercises for Post Operative Patient

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Abstract:
Deep breathing works both to prevent harmful reactions to stress & to help relieve them. If patient practice deep breathing for a few minutes each day, patient will find that events do not upset as much as before. Also whenever patient fill upset taking few slow deep breath can help break tress cycle. Even when patient cannot control the situation, patient can always control his or her breathing & thus change reaction to those circumstances. After surgery, your breathing may not be as deep as usual. You may not be able to cough well. This makes it harder for you to get rid of mucus. When mucus stays in your lungs, it can cause breathing problems. Coughing and deep breathing exercises will help your lungs get rid of mucus.

Keywords: *Breathing, S.I.M., Breathing Exercises*

1. Need of Study

Health promotion is an integral part of the nursing care of all type of patient in all type of environment. At hospital, there is various way by which patient can improve their health. One of the most strategies is regular breathing exercise. The programme of regular exercise has both physical and physiological benefits. When physiological function become normal, patient automatic become fit.

During Post operative period for patient more chance of pulmonary complication so for prevent it and make life style healthy knowledge of Deep breathing exercises is require. Investigator has observed many post-operative cardiac patients who are always look like deep thinking and under stress. For that, knowledge of alternative therapy is required. So after operation patient can change their life style

2. Statement of Problem

A Study to Assess Effectiveness of Self Instructional Module of Breathing Exercises for Post operative Patient Admitted in Post operative ward in Medical College attached selected Government Hospital in Gujarat state."

3. Objectives of the Study

1. To assess the knowledge of post operative patient regarding breathing Exercises before and after distribution of self instructional module on breathing exercises in post operative ward of selected medical college attached government hospital of Gujarat state.
2. To assess the psychomotor skills of post operative patient regarding breathing Exercises before and after Demonstration of Breathing exercises in post operative ward of selected medical college attached government hospital of Gujarat state.

4. Hypotheses

Ho_1 : There is significant difference between Mean Pre-Test and Mean Post-Test knowledge score of sample regarding Breathing exercises after exposed to the SIM and Demonstration, at 0.05 level of significance.

Ho_2: There is significant difference between Mean Pre-Test and Mean Post-Test performance score of sample regarding Breathing Exercises Skills after exposed to the SIM and Demonstration, at 0.05 level of significance.

5. Research Methodology

Research approach: experimental Research method

Through observation researcher knows preoperative Breathing Exercises are not explain in practicing for preoperative patient due to lake of knowledge and skill of performing breathing exercises . So for to give knowledge and Demonstrate the Breathing Exercises for improve the practice of Breathing Exercises during post operative period for prevention of post operative pulmonary complication after operation, researcher has adopted experimental method.

6. Research Design

One group pre-test post-test design.

The research design which was adopted for the study is diagrammed as:

Pre test	**Post test**	
O1	**O2**	**knowledge**
One group	**X**	
O3	**O4**	**performance**

O1 = Pre test of knowledge of experimental group about Breathing Exercises
O2= Post test of knowledge of experimental group about Breathing Exercises
O3= Pre test of performance of experimental group about Breathing Exercises
O4= Post test of performance of experimental group about Breathing Exercises
X= Treatment to experimental group --- Administration of Self Instructional Training Module

7. Research Setting

Geographical area: This study covers the pre and post operative ward of selected medical college attached Government hospital which are more than 1000 bedded, hospitals of Gujarat state. Hospital was selected on random selection.

8. Area / Department of research

Pre and post operative ward of selected medical college attached hospitals of Gujarat is area for research.

9. Target Population

Pre and post operative patient admitted in pre and post operative ward of selected medical college attached Government hospital in Gujarat State.

10. Sample Population

10.1 Inclusive Criteria

1. Pre and post operative patient for abdominal surgery and pulmonary surgery admitted in selected medical college attached hospitals of Gujarat state.
2. Patient who in per operative ward on day of before operation for abdominal surgery and pulmonary surgery for pre test.
3. Patient who in post operative ward on 2nd post operative day for abdominal surgery and pulmonary surgery for post test.
4. In 2nd post operative day was not with ventilator support and general condition was good.
5. Patient can able to read.

11. Sampling Selection Technique

The Investigator adopted purposive sampling technique to select the sample. The Sampling Size was 35.

12. Development of Tool

12.1 Preparation of the Self Instructional Training Module

The Self Instructional Training Module was prepared on the basis of reviewed literature on Breathing Exercises --- books, articles, published and unpublished thesis and professional experience of the Investigator in the surgical ward. For developing the Self Instructional Training Module, content was selected and organized. The content was validated by research guides and experts. The draft of Self Instructional Training Module was arranged in term of Preface, general objectives, and guide line for use of this module.

Structured Observational Rating Scale to Assess Breathing Exercises Skill of Pre operative and post operative Patient Admitted in Surgical ward

Comprised items use of patients. Breathing Exercises Skill of Pre operative and post operative Patient Admitted in Surgical ward. It was 3 point rating scale. There are 2 main task named as Abdominal Breathing Exercises and Spiromery Breathing exercises. Each Main task has 10 sub task. Each sub task was scored as 0, 1, and 2 rating score and for each rating of each task description is given in the tool.

13. Major Findings

Descriptive statically methods were employed for the analysis of tool.

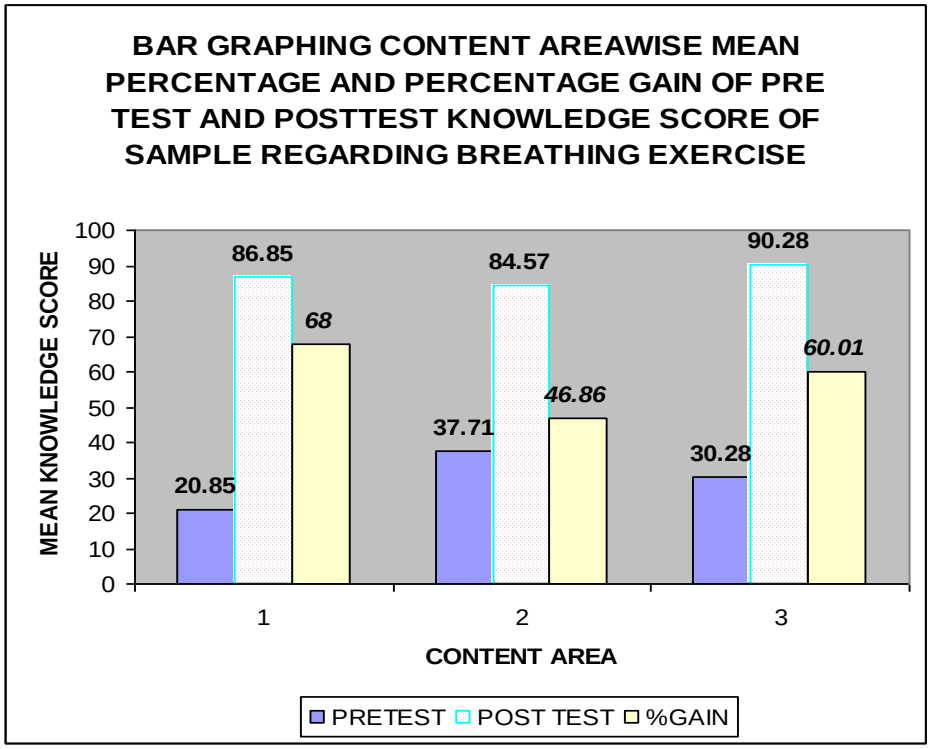
In that **knowledge area** mainly three area those are the related to Basic 1)knowledge regarding Breathing Exercises,2) Knowledge of abdominal breathing exercises and 3) knowledge of spirometry breathing .

There was maximum gain of knowledge in 'basic knowledge of breathing Exercises' area. In the knowledge of breathing Exercises area Mean percentage of Pre-Test was 20.85 % and Post-Test was 85.70%. It indicates that the 68% gain in this area. There was minimum gain in the area 'Knowledge of Abdominal Breathing Exercises '. In this area Mean percentage of Pre-Test was 37.71% whereas; mean percentage of Post-Test was 84.57% which suggests that 46.86 % gain in the area. All over the knowledge score of Pre operative patients Before giving Self-instructional module Mean score of the Sample was 7.0 whereas; giving Self instructional Module Mean score of the sample was 21.94.The difference in knowledge score suggesting the knowledge gain by the sample.

Area-wise Mean, Mean percentage, Standard Deviation and Percentage Gain of Pre-Test and Post-Test Knowledge Scores of Samples Regarding Breathing Exercises (N =35)

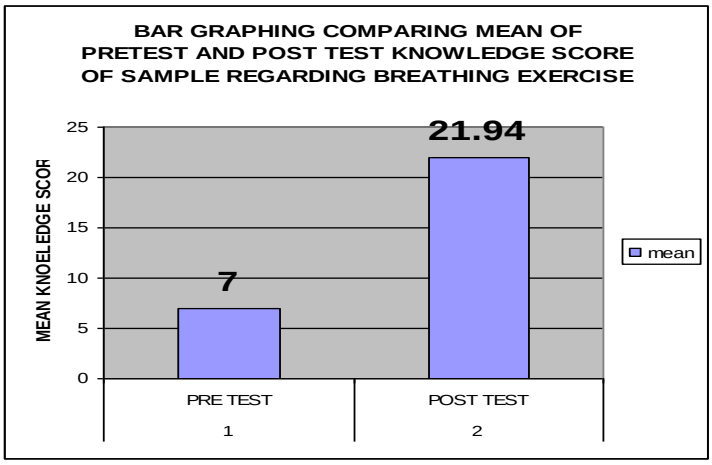
Sr.	Content areas	Max. score	Pre-test knowledge score of sample			Post-test knowledge score of sample			% Gain **
			Obtained score	Mean score	%	Obtained score	Mean score	%	
1	Basic knowledge regarding breathing exercise	10	73	2.08	20.85	304	8.68	86.85	68
2	Abdominal breathing exercise	5	66	1.88	37.71	148	4.22	84.57	46.86
3	Spirometary breathing exercise	10	106	3.02	30.28	316	9.02	90.28	60.01
	Total	25	245	6.98			21.92		

(** = % of post test knowledge score - % of pre test knowledge score)



Mean and Standard Deviations OF Knowledge Scores of Sample (N =35)

Knowledge score	Mean	Mean difference
Pre-test	7.0	14.94
Post-test	21.94	



The comparison between Pre-Test and Post-Test **performance score** obtained by Sample regarding Breathing Exercises skills in terms of all both areas.

The mean percentage of pre-test 19.71 in the task of "**Abdominal breathing exercise"** and mean percentage of post test 67.14 %.

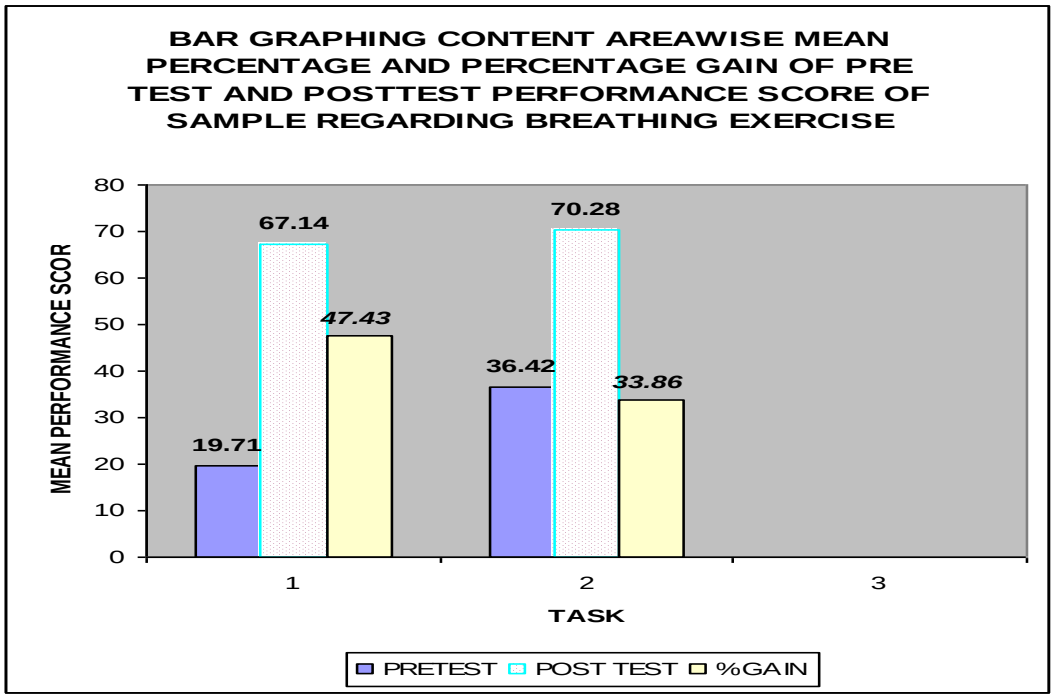
The mean percentage of pre-test 36.42 in the task of "**spirometry breathing exercise"** and mean percentage of post test 70.28 %..

It indicates that the Mean 6.98 score obtained by samples before disseminating SIM on Breathing Exercises and demonstrating the skill with Pre operative patients. and Mean score 21.98 obtained after disseminating SIM on Breathing Exercises and demonstrating the skill with post operative patients.

Task-wise Mean, Mean percentage of Pre test and Post test Performance Scores of Sample for Performing Breathing Exercises Skill In Pre operative and post operative patient (N=35)

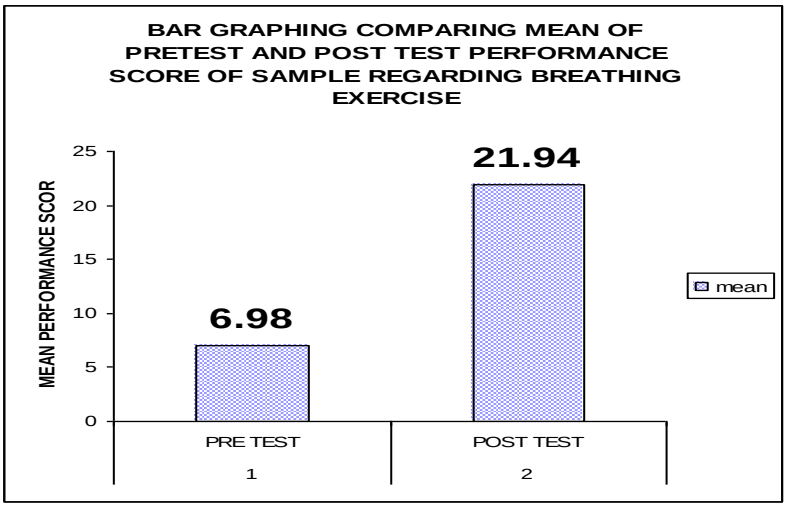
Sr.	Task	Max.score	Pre-test performance score on Abdominal Breathing			Post-test performance score on Abdominal Breathing exercise			% post - pre
			Obtained score	Mean score	%	Obtained score	Mean score	%	
1	Abdominal breathing exercise	20	138	3.94	19.71	470	13.42	67.14	47.43
2	Spirometry breathing exercise	20	255	7.28	36.42	492	14.05	70.28	33.86

(** = % of post test performance score - % of pre test performance score)



Mean and Standard Deviations of Performance Scores of Samples fo Utilizing Breathing Exercises Skills pre operative and post operative Patients (N =35)

Performance score	Mean	Mean difference
Pre-test	6.98	14.98
Post-test	21.94	

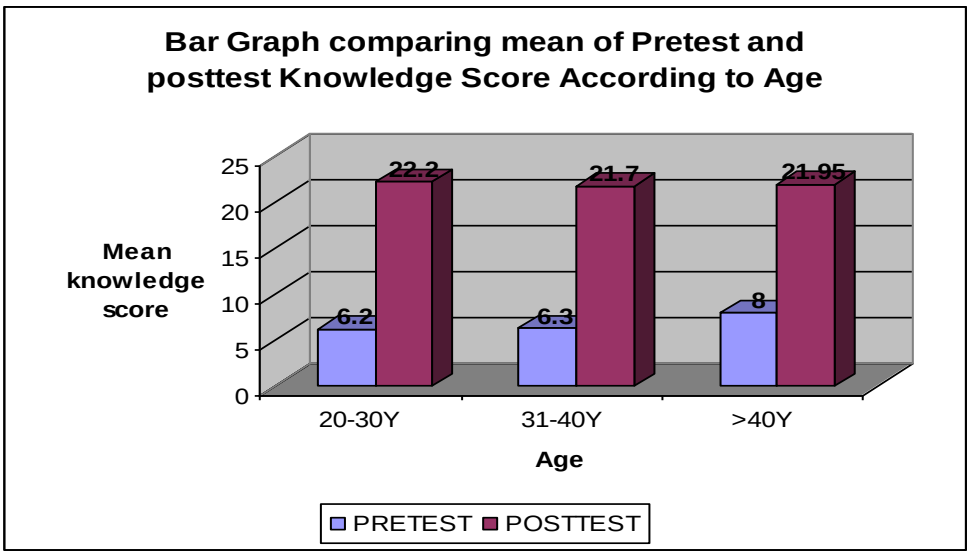


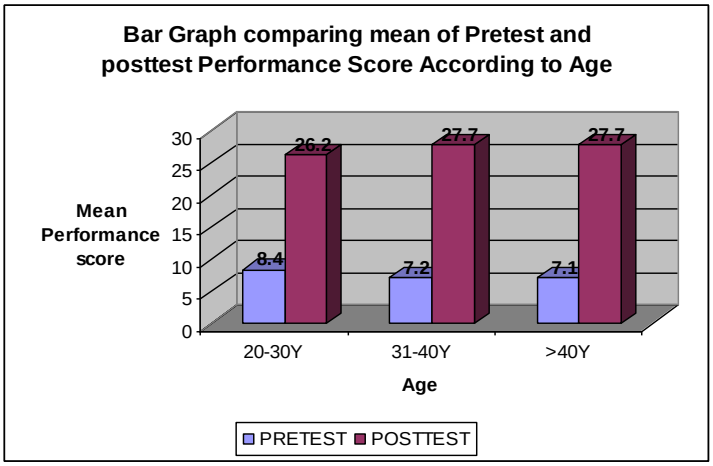
Mean, and mean percentage of Pre-Test and Post-Test Knowledge Scores of sample regarding Breathing Exercises in Relation to selected factors

Sr.	Selected Factors	Mean Pre-Test Knowledge Score	Mean% Pre-Test Knowledge Score	Mean Post-Test Knowledge Score	Mean% Post-Test Knowledge Score	Mean Difference
1	Sex • Male • Female	 7.21 6.36	 20.6 18.17	 22.25 21.27	 63.57 60.77	 42.97 42.60
2	Age • 20-30 years • 31-40 years • > 40 years	 6.2 6.3 8	 17.71 18.0 22.86	 22.2 21.7 21.95	 73.43 62.0 62.71	 55.72 44.00 39.85
3	Operation • Pulmonary Surgery • Abdominal Surgery	 5.8 7.65	 16.57 21.86	 21.5 22.17	 61.43 63.34	 44.86 41.48

Mean, and mean percentage of Pre-Test and Post-Test Performance Scores of sample regarding Breathing Exercises in Relation to selected factors

Sr.	Selected Factors	Mean Pre-Test Knowledge Score	Mean% Pre-Test Knowledge Score	Mean Post-Test Knowledge Score	Mean% Post-Test Knowledge Score	Mean Difference
1	Sex • Male • Female	 7.16 7.6	 20.46 21.71	 27.75 26.9	 79.29 76.86	 58.83 55.15
2	Age • 20-30 years • 31-40 years • > 40 years	 8.4 7.2 7.1	 24.00 20.57 21.29	 26.2 27.7 27.7	 74.86 79.14 79.14	 50.86 58.57 57.85
3	Operation • Pulmonary Surgery • Abdominal Surgery	 7.58 7.13	 21.66 20.37	 24.21 27.0	 69.17 77.14	 47.51 56.77





14. Conclusion

Findings lead to the following major highlights.

1. Knowledge deficit existed both the area of Breathing Exercise among Patients admitted in Surgical ward of Medical college attached Government Hospital.
2. The study in terms of SIM and Demonstration was found to be effective in enhancing the knowledge and skill of the samples regarding Breathing Exercise.
3. Samples gained significant knowledge and skill after exposed to study.
4. The findings indicate that the SIM and Demonstration guideline developed by the investigator was effective in enhancing the knowledge and skills of the samples regarding The Breathing Exercise. Thus the SIM and Demonstration can be used for the large population in different settings.

15. Recommendations

The following recommendations are made on the basis of the findings of the present study.

1. The study can be replicated on a large sample, there by finding can be generalized for a large population
2. A similar study may be replicated on a large sample covering the entire Pre operative nursing care in surgical ward of hospital
3. A study be conducted to identify prevention of post operative completion through use of breathing exercises.
4. Similar study can be conducted for other area pre operative nursing care for patients similar study can be conducted for other surgery like foe cardiac surgery and pre operative health education with use of self instructional module for post operative patients
5. A study can be done by using other teaching strategies, teaching programme, peer support, self monitoring to ensure the practice of Breathing Exercise.
6. A comparative study may be using two different strategies like Self Instruction Training Module and video film or Planned Teaching Program.

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