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Effect Of Diaphragmatic Breathing On Pursed Lip Among Patients With Dyspnea

1. Vandana I, Associate Professor, Kerala University of Health Sciences
2. Leno.J.L.Sam, Assistant Professor, Kerala University of Health Sciences
3. Shilpa.S, Assistant Professor, Kerala University of Health Sciences
4. Prajusha Unni. K, Assistant Professor, Kerala University of Health Sciences
5. Sruthi Krishna, Assistant Professor, Kerala University of Health Sciences

ABSTRACT

A study to assess the effect of diaphragmatic breathing on pursed lip among patients with dyspnea in selected Hospital at Perinthalmanna. The objective of the study was a) Assess the level of diaphragmatic breathing on pursed lip among patients with dyspnea. b) To evaluate the effect of diaphragmatic breathing on pursed lip among patients with dyspnea. c) To find out the association between the pre-test level of dyspnea with selected demographic and clinical variables. A Quasi experimental, one group pre test post test design was adopted foe the study. Purposive sampling technique was used. Sample Size was 60 Patients, admitted in selected hospital. The investigator used Questioner method for assessing level of dyspnea. pursed lip breathing exercise was teach to the patients and bystanders. Post test was conducted using the same research tool. The collected data were analyzed by using descriptive and inferential statistics. The result of pre test shows that out of 60 patients 42(70%) patients have moderate level of dyspnea, 14(23.33%) patients have severe level of dyspnea, 4(6.67%) patients have very severe level of dyspnea. After providing intervention the result of the post test showed that the patients , 32(53.33%) patients have Mild level of dyspnea, 18(30%) patients have moderate level of dyspnea, 10(16.67%) patients have severe level of dyspnea. It was analyzed that there is significant improvement in post-test knowledge scores. There was an association between knowledge and selected demographic variables. The finding of the study suggests that pursed lip breathing exercise is effective in reduce the intensity of the dyspnea patients.

Key words: patients with dyspnea, pursed lip breathing exercise

BACK GROUND OF THE PROBLEM

Dyspnea is perceived differently by each individual, making its assessment reliant on patient self-reporting.It can stem from physiological, pathological, psychological, or environmental factors.**Acute Dyspnea:** Often caused by emergencies like asthma attacks, pulmonary embolism, or heart failure.**Chronic Dyspnea:** Linked to long-term conditions like chronic obstructive pulmonary disease (COPD), interstitial lung disease, or heart disease.

NEED FOER THE STUDY:

Breathing exercises, such as diaphragmatic breathing and pursed-lip breathing, play an important role in reduction of dyspnea in individuals with COPD and might be considered for those patients who are unable to exercise. Breathing exercises in certain can improve pulmonary function, exercise endurance, dyspnea, quality of life, and respiratory muscle strength of COPD patients.

Pursed lip breathing, VF plus exercise, deep breathing exercises, combined breathing exercises, and singing could be used to improve ventilation and quality of life Based on low to moderate quality of evidence, use of these breathing exercises to improve ventilation in COPD patients is conditional.

Pulmonary rehabilitation programs offer supervised exercise and education for those with breathing problems and should be a part of a comprehensive treatment plan for anyone with COPD. Community support groups can provide education and opportunities for COPD patients and their caregivers to share their experience with COPD patients and families.

STATEMENT OF THE PROBLEM

A study to assess the effect of diaphragmatic breathing on pursed lip among patients with dyspnea in selected Hospital at Perinthalmanna.

OBJECTIVES OF THE STUDY:

- Assess the level of diaphragmatic breathing on pursed lip among patients with dyspnea
- To evaluate the effect of diaphragmatic breathing on pursed lip among patients with dyspnea
- To find out the association between the pre-test level of dyspnea with selected demographic and clinical variables.

HYPOTHESIS:

- H_1: there is significant difference between pre test and post test in reduction of dyspnea among patients with dyspnea at 0.05 level of significance
- H_2: there is significant association between dyspnea and selected demographic and clinical variables

METHODOLOGY :

Research approach:

Quasi-experimental approach

Research design:

One group pre-test and post test

Demographic and clinical variables: age, Gender, Area of residence, Monthly Income, Marital status, Education, Occupation, Nutritional Pattern, Habits, History of Allergies, Duration of illness, Number of pervious Hospitalization, Mode of treatment.

Setting: Patient in Moulana Hospital, Perinthalmanna

Sample: size- 60

Sampling technique: purposive sampling technique

Sampling criteria:

Inclusion criteria:

- Both male and female patients who are admitted to Moulana Hospital with Complaints dyspnea
- Able to read and write Malayalam or English
- Willing to participate in the study
- Able to perform breathing exercises

Exclusion criteria:

- Patients who are above 85 years of age
- Who have known mental illness or cognitive impairment
- Who are unconscious
- Who are critically ill

PLAN FOR DATA COLLECTION

Formal permission to conduct this study was obtained from the Principal of Alshifa College of Nursing, the Senior Consultant, and the Ethical Committee of selected hospitals in Perinthalmanna, as well as from the participating patients. A pre-test was administered using a structured questionnaire to gather demographic and clinical data.

An intervention was then provided, during which both the patient and their bystander were educated. Patients were instructed to continue the exercises every 4 hours for a period of 7 days. After the 7-day intervention period, a post-test was conducted using the same structured questionnaire.

Data analysis was conducted using both descriptive and inferential statistics to determine the effectiveness of the intervention

RESULT:

Table :1

S.No	DEMOGRAPHICAL VARIABLES	n	f
1	Age in Years		
	a. 31-40	4	6.67%
	b. 41-50	12	20.00%
	c. 51-60	26	43.33%
	d. Above 60	18	30.00%
2	Gender		
	a. Male	48	80.00%
	b. Female	12	20.00%
3	Area of Residence		
	a. Urban	38	63.33%
	b. Rural	22	36.67%
4	Monthly Income in Rupees		
	a. 10,000-15,000	12	20.00%
	b. 15,001-20,000	16	26.67%
	c. 20,001-25,000	18	30.00%

	d. Above 25,000	14	23.33%
5	Marital Status		
	a. Married	45	75.00%
	b. Unmarried	9	15.00%
	c. Divorce/Separate	4	6.67%
	d. Widower/widow	2	3.33%
6	Education		
	a. Illiterate	2	3.33%
	b. Schooler	8	13.33%
	c. Under graduate	26	43.33%
	d. Post graduate	24	40.00%
7	Occupation		
	a. Labourer	12	20.00%
	b. Homemaker	8	13.33%
	c. Farmer	16	26.67%
	d. Factory worker	14	23.33%
	e. Business	10	16.67%
8	Nutritional Pattern		
	a. Vegetarian	8	13.33%
	b. Mixed Diet	52	86.67%
9	Habits		
	a. Smoking	2	3.33%
	b. Alcoholism	5	8.33%
	c. Tobacco Chewing	2	3.33%
	d. All the above	37	61.67%
	e. None of these	14	23.33%
10	History of Allergies		
	a. Yes	48	80.00%

	b. No	12	20.00%
11	Duration of illness		
	a. Less than 1 Years	14	23.33%
	b. 1-3 years	20	33.33%
	c. 4-6 years	18	30.00%
	d. Above 6 years	8	13.33%
12	Number of pervious hospitalization		
	a. 1-3 times	22	36.67%
	b. 4-6 times	25	41.67%
	c. More than 7 times	13	21.67%
13	Mode of treatment		
	a. Medications	26	43.33%
	b. Inhalers	34	56.67%

Table: 1 described about the frequency, percentage distribution of demographic variable. As per the finding of the study, the majority of the subject, i.e. out of 60 Patients 26(43.33%) of them were age between 51-60 years, with regards Gender out of 60 Patients 48(80%) are Male, out of 60 Patients 38(63.33%) are living in Urban, out of 60 Patients 18(30%) are 20.001-25,000 is a monthly income, out of 60 Patients 45(75%) are Married, out of 60 Patients 26(43.33%) are under graduate, out of 60 Patients 16(26.67%) are farmer, out of 60 Patients 52(86.67%) are Mixed diet, out of 60 Patients 37(80%) are having habits of smoking, alcoholism, and Tobacco Chewing, out of 60 Patients 48(80%) are having history of allergies, out of 60 Patients 20(33.33%) are having illness of 1-3 years, out of 60 Patients 25(41.67%) are admitted in hospital for 4-6 times, out of 60 Patients 34(56.67%) are taking Medication.

Table2-Frequency percentage and distribution of samples on the effect of diaphragmatic breathing on pursed lip among patients with dyspnea

Interpretation		**Pre Test**		**Post Test**	
Level of dyspnea	**Score**	**n**	**f**	**n**	**f**
Mild	20-30	0	0.00%	32	53.33%
Moderate	31-40	42	70.00%	18	30.00%
Severe	41-50	14	23.33%	10	16.67%
Very Severe	51 -80	4	6.67%	0	0.00%

Table-3 Comparison of mean pre- test and post-test score: -. N=60

S.No	**Level of dyspnea**	Mean	SD	Mean Different	T Test
1	Pre Test	39.6	6.8	8.06	5.6
2	Post Test	31.6	6.7		

Table 4: Association between the effect of diaphragmatic breathing on pursed lip and demographic variable

S.No	**DEMOGRAPHICAL VARIABLES**	**Moderate**		**Severe**		**Very Severe**		**Chi Square**
		n	**f**	**n**	**f**	**n**	**f**	
1	Age in Years							6.24 df=6 NS
	a. 31-40	2	3.33%	1	1.67%	1	1.67%	
	b. 41-50	8	13.33%	3	5.00%	1	1.67%	
	c. 51-60	22	36.67%	8	13.33%	0	0.00%	

	d. Above 60	10	16.67%	2	3.33%	2	3.33%	
2	Gender							1.66 df=2 NS
	a. Male	32	53.33%	12	20.00%	4	6.67%	
	b. Female	10	16.67%	2	3.33%	0	0.00%	
3	Area of Residence							4.02 df=2 NS
	a. Urban	30	50.00%	6	10.00%	2	3.33%	
	b. Rural	12	20.00%	8	13.33%	2	3.33%	
4	Monthly Income in Rupees							9.3 df=6 NS
	a. 10,000-15,000	10	16.67%	2	3.33%	0	0.00%	
	b. 15,001-20,000	12	20.00%	2	3.33%	2	3.33%	
	c. 20,001-25,000	14	23.33%	3	5.00%	1	1.67%	
	d. Above 25,000	6	10.00%	7	11.67%	1	1.67%	
5	Marital Status							29.1 df=6 S*
	a. Married	38	63.33%	7	11.67%	0	0.00%	
	b. Unmarried	2	3.33%	4	6.67%	3	5.00%	
	c. Divorce/Separate	2	3.33%	2	3.33%	0	0.00%	
	d. Widower/widow	0	0.00%	1	1.67%	1	1.67%	
6	Education							16.73 df=6 S*
	a. Illiterate	0	0.00%	1	1.67%	1	1.67%	
	b. Schooler	3	5.00%	3	5.00%	2	3.33%	
	c. Under graduate	21	35.00%	4	6.67%	1	1.67%	
	d. Post graduate	18	30.00%	6	10.00%	0	0.00%	
7	Occupation							1.82

	a. Labourer	8	13.33%	3	5.00%	1	1.67%	df=8 NS
	b. Homemaker	6	10.00%	2	3.33%	0	0.00%	
	c. Farmer	11	18.33%	4	6.67%	1	1.67%	
	d. Factory worker	11	18.33%	2	3.33%	1	1.67%	
	e. Business	6	10.00%	3	5.00%	1	1.67%	
8	Nutritional Pattern							0.97 df=2 NS
	a. Vegetarian	6	10.00%	1	1.67%	1	1.67%	
	b. Mixed Diet	36	60.00%	13	21.67%	3	5.00%	
9	Habits							13.17 df=8 NS
	a. Smoking	1	1.67%	1	1.67%	0	0.00%	
	b. Alcoholism	2	3.33%	2	3.33%	1	1.67%	
	c. Tobacco Chewing	0	0.00%	1	1.67%	1	1.67%	
	d. All the above	27	45.00%	8	13.33%	2	3.33%	
	e. None of these	12	20.00%	2	3.33%	0	0.00%	
10	History of Allergies							0.1042 NS
	a. Yes	34	56.67%	11	18.33%	3	5.00%	
	b. No	8	13.33%	3	5.00%	1	1.67%	
11	Duration of illness							27.3 df=6 S*
	a. Less than 1 Years	13	21.67%	0	0.00%	1	1.67%	
	b. 1-3 years	12	20.00%	8	13.33%	0	0.00%	
	c. 4-6 years	16	26.67%	1	1.67%	1	1.67%	
	d. Above 6 years	1	1.67%	4	6.67%	3	5.00%	
12	Number of pervious hospitalization							14.4

	a. 1-3 times	20	33.33%	2	3.33%	0	0.00%	df=4 NS
	b. 4-6 times	14	23.33%	10	16.67%	1	1.67%	
	c. More than 7 times	8	13.33%	2	3.33%	3	5.00%	
13	Mode of treatment							1.77 df=2 NS
	a. Medications	17	28.33%	6	10.00%	3	5.00%	
	b. Inhalers	25	41.67%	8	13.33%	1	1.67%	

CONCLUSION:

The study finding expressed that the most of the patient have mild dyspnea after the interventation and there is association between the effect of diaphragmatic breathing on pursed lip and demographic variable

RECOMMENDATIONS:

- The same study can be conducted in different hospital.
- The study can be done on small population.

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