

Effectiveness Of Nurse Navigated Self-Management Strategies on Knowledge, Skill and Respiratory Parameters Regarding Management of Chronic Obstructive Pulmonary Diseases Among Patients Attending Outpatient Department in Selected Hospital

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ABSTRACT

Background: Chronic obstructive pulmonary disease (COPD) is a lung disease characterized by chronic obstruction of lung airflow that interferes with normal breathing and is not fully reversible. **Aim and Objective:** To assess the effectiveness of Nurse Navigated Self-Management Strategies on knowledge, skill and respiratory parameters regarding management of COPD among patients attending OPD. **Methodology:** Quantitative research approach, Quasi Experimental-Pretest post-test with non-equivalent control group design, was adopted to assess effectiveness of Nurse Navigated Self-Management Strategies (NNSMS) on knowledge, skill and respiratory parameters regarding management of Chronic Obstructive Pulmonary Diseases (CORD) among 300 COPD patients (150 samples in each experimental and control group) attending outpatient department (OPD) at selected hospital. COPD patients who fulfilled the inclusion and exclusion criteria, using Non probability purposive sampling technique was used to select the samples in this study. Nurse Navigated Self Management Strategies (NNSMS) was administered and the level of knowledge, skill and respiratory parameters and compared with the pre and post test level between experimental and control group. **Results:** The study findings revealed that the pretest knowledge score was 10.93 with SD 1.31 and the post test knowledge score was 19.47 with SD 1.98 and the skill score of pretests was 5.10 with SD 1.86 and post test score was 11.37 with SD 2.70. The respiratory parameters pretest score was 8.30 with SD 2.18 and posttest Mean score was 5.87 with SD 2.36. The calculated 'Paired t-test' value (18.89, 3.77 and 17.47) for knowledge skill and respiratory parameters, respectively. There was very high statistical significance was found in the experimental group at the level $p < 0.001$. **Conclusion:** The results revealed that the Nurse Navigated Self-Management Strategies (NNSMS) on knowledge, skill and respiratory parameters was effective in improving the knowledge and skill, and reducing the respiratory parameters regarding

management of Chronic Obstructive Pulmonary Diseases. It can be utilized for the home management of patients with COPD and other respiratory diseases. Keywords: Chronic Obstructive Pulmonary Diseases. Nurse Navigated Self-Management Strategies knowledge, skill and respiratory parameters.

Keywords: Chronic obstructive pulmonary disease, nurse navigated self strategies knowledge, skill and respiratory parameters.

INTRODUCTION

Chronic Obstructive Pulmonary Disease (COPD) is a progressive inflammatory disease characterized by chronic obstruction in the peripheral bronchus and pulmonary emphysema. The disease is disabling with symptoms such as chronic cough, phlegm, wheezing, shortness of breath and increased infections of the respiratory passage. Changes in the lungs result in mucus hyper secretion, dysfunction of the cilia, airflow limitation and hyper inflation of the lungs, gas exchange abnormalities, pulmonary hypertension and cor pulmonale.

“When you can’t breathe, nothing else matters”, is the mantra of the American Lung Association. Chronic obstructive pulmonary disease results from increased resistance to airflow because of airway obstruction or airway narrowing.

Persons with COPD are greatly under estimated because the disease is usually not diagnosed until it is moderately advanced. Patients usually seek medical help when they have an acute respiratory infection, with dyspnea being the main concern. Dyspnea is often progressive and initially occurs with exertion, gradually interferes with daily activities and in late stages dyspnea may be present at rest also. The person becomes more of a chest breather, relying on the intercostals and accessory muscles rather than effective abdominal breathing.

Breathing exercises may assist the patient during rest and activity by decreasing dyspnea, improving oxygenation, and slowing the respiratory rate.

STATEMENT OF THE PROBLEM

“A quasi-experimental study to assess the effectiveness of Nurse Navigated Self - Management Strategies on knowledge, skill and respiratory parameters regarding management of Chronic Obstructive Pulmonary Diseases among patients attending Outpatient Department in selected settings”.

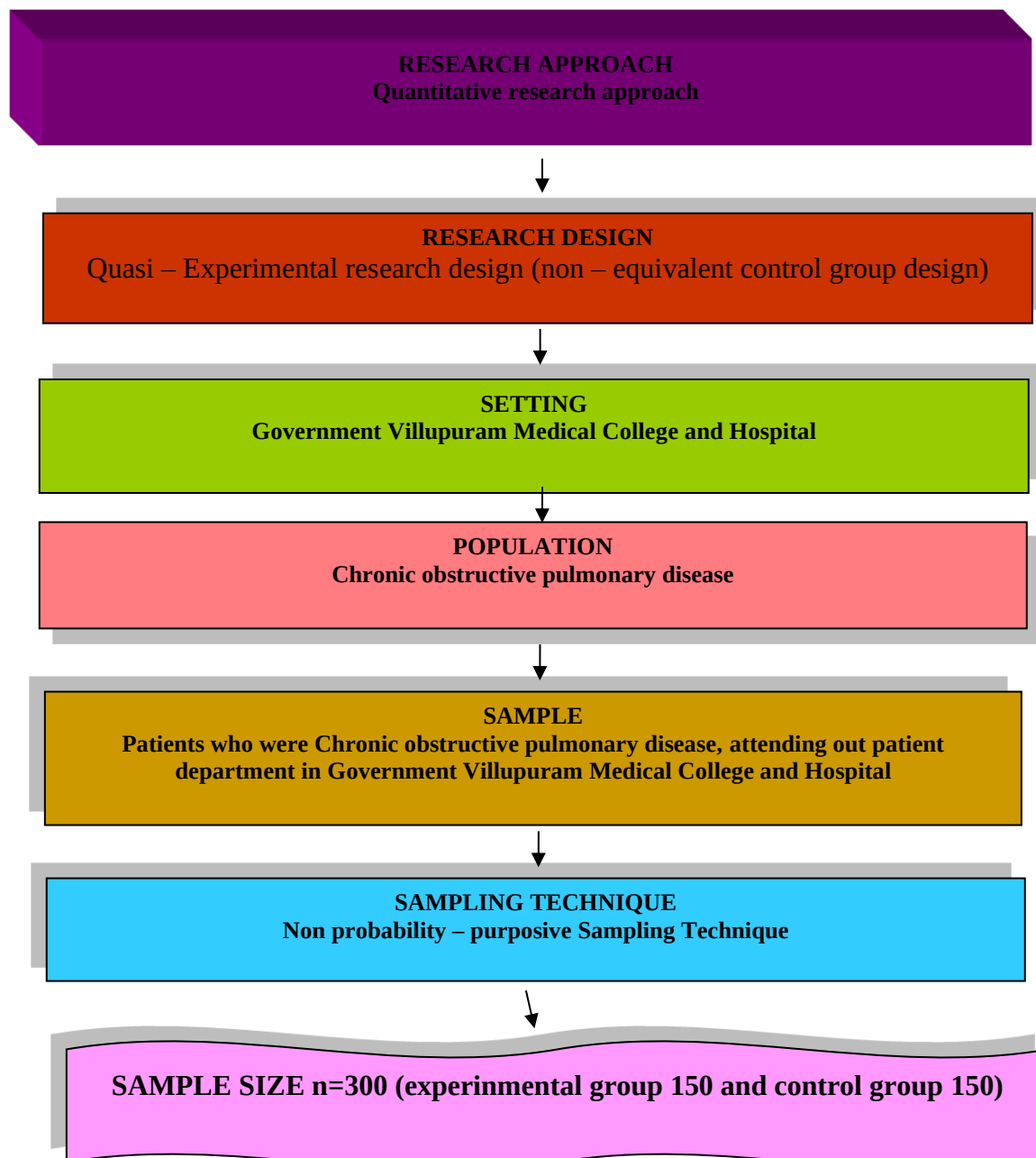
OBJECTIVES

- To assess and compare the pretest and posttest level of knowledge, skill and respiratory parameters regarding management of COPD in the experimental and control group.
- To assess the effectiveness of Nurse Navigated Self-Management Strategies on knowledge, skill and respiratory parameters regarding management of COPD in the experimental and control group.
- To correlate between the mean differed level of knowledge, skill and respiratory parameters regarding management of COPD in the experimental and control group.
- To associate the selected demographic variables with mean differed level of knowledge, skill and respiratory parameters regarding management of COPD in the experimental and control group.

NULL HYPOTHESES

- NH1: There is no significant effect of Nurse Navigated Self-Management Strategies on the level of knowledge, skill and respiratory parameters regarding management of COPD in the experimental and control group.
- NH2: There is no significant relationship between the mean differed level of knowledge, skill and respiratory parameters regarding management of COPD in the experimental and control group.
- NH3: There is no significant association of selected demographic variables with the mean differed level of knowledge, skill and respiratory parameters regarding management of COPD in the experimental and control group.

RESEARCH METHODOLOGY



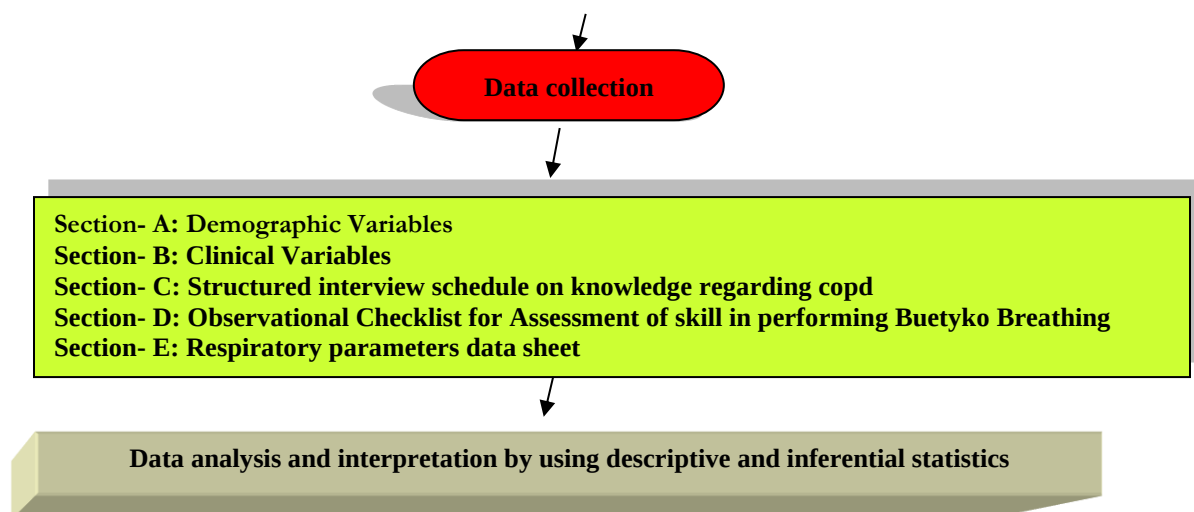


Figure 1: Schematic Representation of Research Methodology

RESULTS AND DISCUSSION

Assessment of Pre-Test and Post Test Level of Knowledge, Skill and Respiratory Parameters Regarding Management of Copd

Table:1 mean and mean percentage distribution of domain wise pretest and post test level of knowledge score (n=300)

COPD Knowledge Domain	Level of Knowledge							
	Experimental group (n=150)				Control group (n=150)			
	Pre test		Post test		Pre test		Post test	
	Mean	%	Mean	%	Mean	%	Mean	%
Definition	0.67	67	0.97	97	0.63	63	0.60	60
Types	0.60	80	0.97	97	0.63	63	0.60	60
Risk factors	2.44	76.60	1.60	80	2.27	72.50	1.30	65
Clinical manifestation	4.10	62	3.87	77.40	4.12	72.40	2.27	45.40
Diagnostic evaluation	2.18	68.20	1.80	90	1.40	70.00	1.47	73.50
Complications	0.70	70	0.90	90	0.67	67	0.67	67
Management	4.62	47.16	4.07	67.83	2.30	38.33	2.50	41.67
Prevention	0.84	84	0.90	90	0.57	57	0.63	63
Buteyko breathing technique	6.08	44.70	4.60	76.67	1.97	32.83	2.10	35

Assessment of Pre-Test and Post Test Level of Skill Regarding Management of Copd

Table:2 mean and mean percentage distribution of domain wise pretest and post test level of skill score (n=300)

Skill Domains breathing technique	Level of skill							
	Experimental group (n=150)				Control group (n=150)			
	Pre test		Post test		Pre test		Post test	
	Mean	%	Mean	%	Mean	%	Mean	%
Relaxed breathing	2.63	35.6	6.57	86.18	1.63	27.17	1.73	28.83
Control pause	4.67	44.67	7.80	85.14	3.77	41.89	3.97	44.11

Assessment of Pre-Test and Post Test Level of Respiratory Parameters Regarding Management of Copd

Table:3 mean and mean percentage distribution of domain wise pretest and post test level of respiratory parameters score (n=300)

Domains of respiratory parameters	Level of respiratory parameters							
	Experimental group (n=150)				Control group (n=150)			
	Pre test		Post test		Pre test		Post test	
	Mean	%	Mean	%	Mean	%	Mean	%
History collection	3.93	49.13	2.97	37.13	4.10	51.25	3.90	48.75
Observation	2.70	54	1.87	37.40	2.83	56.6	2.73	54.60
Auscultation	1.20	60	0.83	41.50	1.23	61.50	1.17	58.50
Palpation	0.47	47	0.20	20	0.50	50	0.47	47

Effectiveness of Nurse Navigated Self Management Strategies on Knowledge, Skill and Respiratory Parameters Regarding Management of Copd

Table:4 comparison of pretest and post test scores regarding knowledge, skill, respiratory parameters score (n=300)

Group	Comparison of mean value						
	Pre test		Post test		Difference		Paired 't' test
	Mean	SD	Mean	SD	Mean	SD	
Experimental							
Knowledge	10.93	1.31	19.47	1.98	8.54	2.47	t=18.89 P=0.001*** (S)
Skill	5.10	1.86	11.37	2.70	6.27	3.53	t=3.77 P=0.001*** (S)
Respiratory parameter	8.30	2.18	5.87	2.36	2.43	1.96	t=17.47 P=0.001*** (S)
Control							
Knowledge	11.10	2.89	12.13	2.98	1.03	2.51	t=1.93 P=0.001(NS)
Skill	5.40	1.71	5.70	1.91	0.03	0.81	t=1.86 P=0.06(NS)
Respiratory parameter	8.67	1.52	8.27	1.96	0.4	0.70	t=1.66 P=0.10(NS)

***p<0.001 very highly significant NS Non significant

Correlation Between Mean Differed Level of Knowledge, Skill and Respiratory Parameters in The Experimental and Control Group

Table:5 correlation between mean differed level of knowledge, skill, respiratory parameters. (n=300)

Variables		Mean difference Mean±SD	Karl pearson correlation co efficient	Types of correlation
Experimental Group	Knowledge vs Skill	8.53±2.47 6.27±1.96	r= 0.48 p=0.001***	Positive moderate correlation
	Knowledge vs Respiratory parameter	8.53±2.47 -2.43±3.53	r= -0.37 p=0.01**	Negative fair correlation
	Skill vs Respiratory parameter	6.27±1.96 2.43±3.53	r= -0.46 p=0.01**	6Negative moderate correlation
Control Group	Knowledge vs Skill	1.03±2.51 0.30±0.70	r = 0.17 P=0.46	Positive Poor correlation

	Knowledge vs Respiratory parameter	1.03±2.51 0.40±0.81	-	r = -0.14 P=0.39	Negative poor correlation
	Skill vs Respiratory parameter	0.30±0.70 0.40±0.81	-	r = 0.16 P=0.41	Negative poor correlation

"r" always lies between -1 to +1, r=0.0 – 0.2 (poor correlation), r=0.2 - 0.4 (fair correlation), r=0.4 - 0.6 (moderate correlation), r=0.6 – 0.8 (substantial correlation), r= 0.8 - 1.0 (strong correlation) *p<0.05 significant **p<0.001 highly significant ***p<0.001 very highly significant NS Non significant.

Thus, the Nurse Navigated Self-Management Strategies (NNSMS). On knowledge, skill and respiratory parameters regarding management of Chronic Obstructive Pulmonary Diseases (COPD) was effective in improving the knowledgeskill and respiratory parameters regarding management of Chronic Obstructive Pulmonary Diseases (COPD).

CONCLUSION

The findings proved that the Nurse Navigated Self-Management Strategies (NNSMS). has effectively improved the knowledge skill and respiratory parameters. The health care providers in their practice can use Information education communication (IEC) via pamphlets to inculde the regular practice on Nurse Navigated Self-Management Strategies, for the prevention and management. COPD and readmission to the hospital. Hence, it can be used as an effective, life course approach to create a mass awareness and improve the knowledge, skill and respiratory parameters regarding management of Chronic Obstructive Pulmonary Diseases (COPD).

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