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Research Paper

"A study to assess the effectiveness of breath holding techniques on improving symptoms of respiratory disorder among people residing at selected rural area, puducherry."

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I. INTRODUCTION

Respiratory disorder, or respiratory disease, is a term that encompasses a variety of pathogenic conditions that affect respiration in living organisms. Respiration makes gas exchange possible in higher organisms. The gas exchange involves taking oxygen into the body and expelling carbon dioxide. Respiratory disease occurs in the respiratory tract, which includes the alveoli, bronchi, bronchioles, pleura, pleural cavity, trachea and the nerves and muscles of breathing .There are three main types of respiratory disease: airway diseases, lung tissue diseases and lung circulation diseases. Airway diseases affect the tubes that carry oxygen and other gases into and out of the lungs. Airway diseases usually result in narrowing or blocking of the passageways. Lung tissue diseases affect the structure of lung tissue and result in scarring or inflammation of the lung tissue. This, in turn, makes breathing difficult. Lung circulation diseases occur when the blood vessels in the lungs become clotted, inflamed or scarred. These diseases affect the ability of the lungs to receive oxygen and produce carbon dioxide, and they may affect the functioning of the heart.

II. REVIEW OF LITERATURE:

Anthony R Bain, Ivan Drvis, ZeljkoDujic, David B MacLeod, Philip N Ainslie (2017) Breath-hold-related activities have been performed for centuries, but only recently, within the last ~30 years, has it emerged as an increasingly popular competitive sport. In apnoea sport, competition relates to underwater distances or simply maximal breath-hold duration, with the current (oxygen-un supplemented) static breath-hold record at 11 min 35s. Remarkably, many ultra-elite apneists are able to suppress respiratory urges to the point where consciousness fundamentally limits a breath-hold duration. Here, arterial oxygen saturations as low as~50% have been reported. In such cases, oxygen conservation to maintain cerebral functioning is critical, where responses ascribed to the mammalian dive reflex, e.g. sympathetically mediated peripheral vasoconstriction and vagally mediated bradycardia, are central. In defence of maintaining global cerebral oxygen delivery during prolonged breath holds, the cerebral blood flow may increase by ~100% from resting values. Interestingly, near the termination of prolonged dry static breath holds, recent studies also indicate that reductions in the cerebral oxidative metabolism can occur, probably attributable to the extreme hypercapnia and irrespective of the hypoxaemia. In this review, we highlight and discuss the recent data on the cardiovascular, metabolic and, particularly, cerebrovascular function in competitive apneists performing maximal static breath holds. The physiological adaptation and maladaptation with regular breath-hold training are also summarized, and future research areas in this unique physiological field are highlighted; particularly, the need to determine the potential long-term health impacts of extreme breath holding.

STATEMENT OF THE PROBLEM:

"A study to assess the effectiveness of breath holding techniques on improving symptoms of respiratory disorder among people residing at selected rural area , Puducherry"

OBJECTIVES:

- To assess the effectiveness of breath holding techniques
- To prevent the symptoms of respiratory disorder

ASSUMPTIONS:

- This study will help people to gain knowledge regarding effectiveness of breath holding techniques
- A structured question may helped people to gain knowledge regarding effectiveness of breath holding techniques and improving symptoms of respiratory disorder

III. MATERIALS AND METHODS :

This chapter describes the research methodology followed to assess the effectiveness of breath holding techniques on improving symptoms of respiratory disorder among people residing at selected rural area, Puducherry

Section A: Demographic variables such as age, gender, religion, education, job type, marital status, dietary habits, bad habits.

Section B: Multiple choice questionnaire regarding respiratory disorders and breath holding techniques among people residing atsirukaripalayam, puducherry.

It consists of totally 25 questions. Each question carry one marks.

SCORE INTERPRETATION:

Classification	**Mild or moderate**	**Moderate to severe**	**Severe**
Score	**0-10**	**10-16**	**16-25**

Section: C

It consists of 25 questions, the total possible maximum score is 25.

Classification	**Negative approach**	**Positive approach**
Score	0-10	10-25

RESEARCH APPROACH:

A quantitative research approach was selected for this study.

RESEARCH DESIGN:

The descriptive research design was adapted for this study.

POPULATION:

The population of the study is silukarapalyam village people.

SAMPLE:

The study consists of people residing at silukarapalayam, puducherrry who fulfil the inclusion criteria

SAMPLE SIZE:

The sample size of the study consists of 50

SAMPLING TECHNIQUE:

The conveniences sampling technique was used for this study.

SAMPLING CRITERIA:

Inclusion criteria:

- People with symptoms of respiratory disorders
- Those who are willing to participate in the study
- Both male and female

Exclusion criteria:

- People other than geriatric
- Those who are not willing to participate in the study.

IV. RESULTS:

Out of the 50 respiratory disorder patients who were interviewed, Majority of the patients 15(30%) of study population were in the age group are 30-40 years. Majority of thepatients were male 26(52%). All of thepatients were Hindu 50(100%). Majority of thepatients were Illiterate 20(40%). Majority of thepatients were Unemployed 19(38%). Majority of thepatients were married 35(70%). Majority of thepatients were Nuclear and joined family 24(48%). Majority of thepatients were having 2children 23(46%). Majority of thepatients were Rural 49(98%). Majority of thepatients were had not any lifestyle diseases 40(80%).

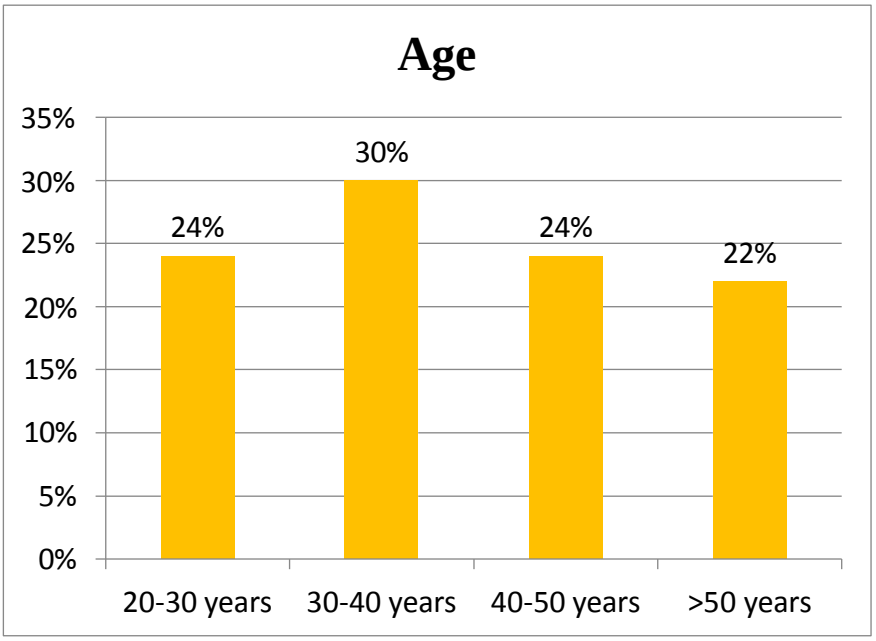


TABLE 1: Frequency and percentage wise distribution of demographic variables **(N=50)**

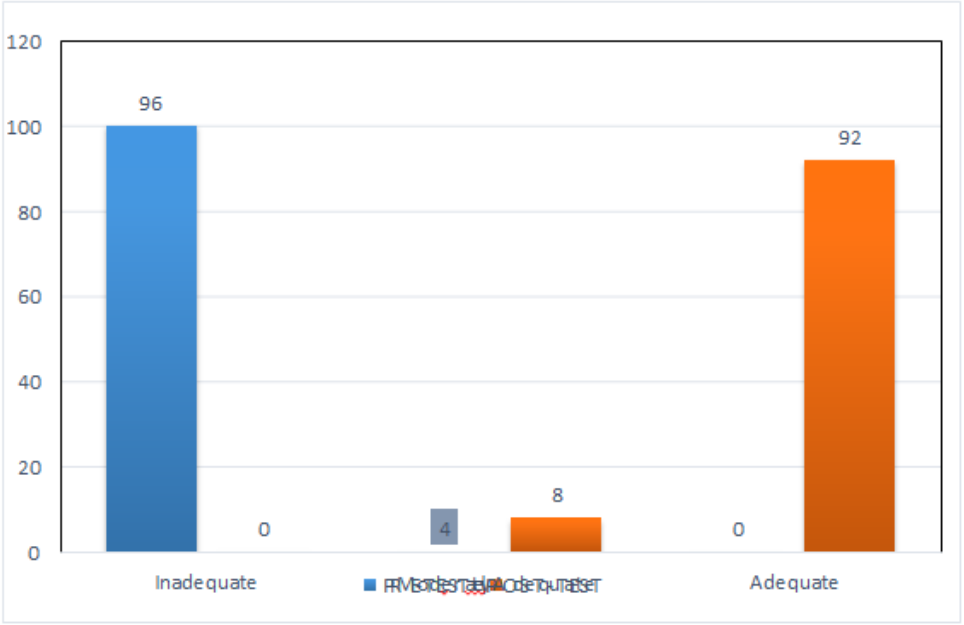
S.NO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
01	Age		
	a. 20-30years	10	20
	b. 30- 40years	16	32
	c. 40-50years	12	24
	d. >50years	12	24
02	Gender		
	a. Male	28	56
	b. Female	22	44
03	Religion		
	a. Hindu	50	100
	b. Muslim	00	0
	c. Christian	00	0
04	Education		
	a. Illiterate	18	36
	b. Primary school	12	24
	c. Secondary school	13	26
	d. Graduate	07	14
05	Job type		
	a. Government job	03	6
	b. Private job	12	24
	c. Own business	15	30
	d. Unemployed	20	40

06	Marital status		
	a. Unmarried	10	20
	b. Married	35	70
	c. Divorced	03	6
07	Type of family		
	a. Nuclear	24	48
	b. Joined family	23	46
	c. Single	02	4
08	No of children		
	a. 1 children	11	22
	b. 2 children	24	48
	c. 2 or more children	09	18

09	Type of residence		
	a. Rural	49	98
	b. Urban	01	2
10	Any lifestyle diseases		
	a. Yes	10	20
	b. No	39	78

Frequency and percentage wise distribution of pretest and post -test of the level of knowledge regarding breath holding techniques on improving symptoms of respiratory disorder.

LEVEL OF KNOWLEDGE	PRE-TEST		POST-TEST	
	N	%	N	%
Inadequate	48	96	00	00
Moderately Adequate	00	00	04	08
Adequate	00	00	46	92



Effectiveness of the level of knowledge of breath holding techniques on improving symptoms of respiratory disorder.

GROUP	TEST	MEAN	STANDARD DEVIATON	MEAN DIFFERENCE	't' VALUE Paired -t test	Df	'p' VALUE
LEVEL OF KNOWLEDGE OF PLANNED TEACHING PROGRAMME	Pretest	5.98	1.220	-12.66	-58.37	49	0.000** HS
	Posttest	18.64	1.816				

****-p < 0.001 highly significant, NS-Non Significant.**

TABLE 3: Mean and standard deviation regarding

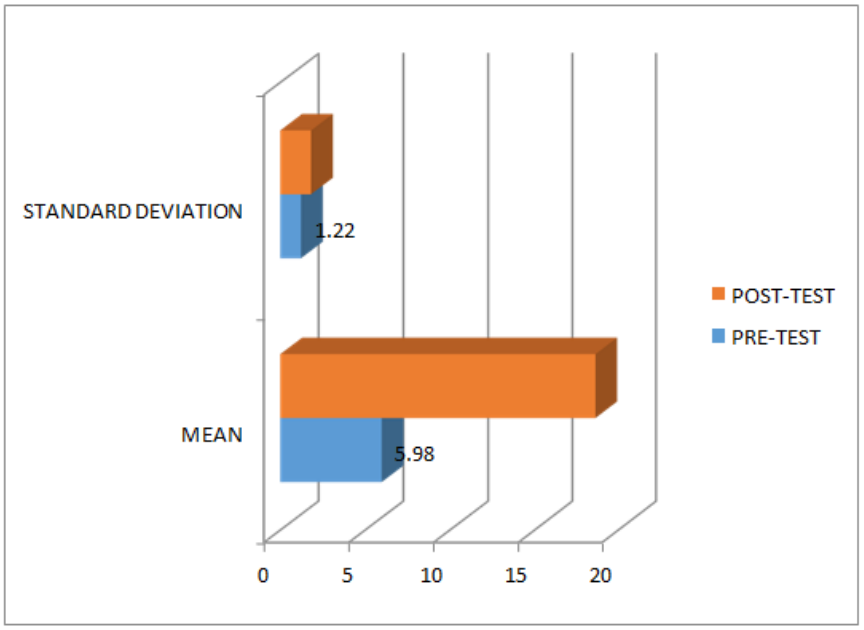


TABLE 4: Association with the pre-test level of knowledge with their selected demographic variables

(N=50)

S.No	DEMOGRAPHIC VARIABLES	Inadequate		Moderately adequate		Adequate		X^2
		N	%	N	%	N	%	
01	Age							2.389 Df=3 0.496
	a. 20- 30 year	0	0	1	2	9	18	
	b. 30- 40 year	0	0	1	2	15	30	
	c. 40 – 50 year	0	0	0	0	12	24	
	d. >50 year	0	0	2	4	10	20	
02	Gender							5.534 Df=1 0.019*
	a. Male	0	0	0	0	28	56	
	b. Female	0	0	4	8	18	36	
03	Religion							1 Df=1
	a. Hindu	0	0	4	8	46	92	
	b. Muslim	0	0	0	0	0	0	
	c. Christian	0	0	0	0	0	0	

04	Education							7.729 Df=3 0.052*
	a. Illiterate	0	0	4	8	14	28	
	b. Primary school	0	0	0	0	12	24	
	c. Secondary school	0	0	0	0	13	26	
	d. Graduate	0	0	0	0	7	14	
05	Job type							2.672 Df=3 0.445
	a. Government job	0	0	0	0	3	6	
	b. Private job	0	0	0	0	12	24	
	c. Own business	0	0	1	2	14	28	
	d. Unemployed	0	0	3	6	17	34	
06	Marital status							1.863 Df=3 0.601
	a. Unmarried	0	0	0	0	10	20	
	b. Married	0	0	4	8	31	62	
	c. Divorced	0	0	0	0	3	6	
07	Type of family							4.710 Df=3 0.194
	a. Nuclear	0	0	4	8	20	40	
	b. Joined family	0	0	0	0	23	46	
	c. Divorced	0	0	0	0	2	4	
08	No of children							10.749 Df=3 0.013*
	a. 1 children	0	0	0	0	11	22	
	b. 2 children	0	0	0	0	24	48	
	c. 2 or more children	0	0	2	4	7	14	
09	Type of residence							0.089 Df=1 0.766
	a. Rural	0	0	4	8	45	90	
	b. Urban	0	0	0	0	1	2	
10	Any lifestyle diseases							0.146 Df=2 0.929
	a. Yes	0	0	1	2	9	18	
	b. No	0	0	3	6	36	72	

V. CONCLUSION AND RECOMMENDATIONS:

A study to assess the effectiveness of the breath holding techniques on improving symptoms of respiratory disorder among people residing at selected rural area, puducherry.. The findings of the study revealed **In pre - test**, Majority of patients 48(96%) had inadequate and 2(4%) had moderate level of knowledge and the mean and standard deviation of the level of knowledge of breath holding techniques on improving symptoms of respiratory disorder is 5.98±1.220. **In post- test**, Majority of patients 46 (92%) had adequate and 4 (8%) had Moderate level of knowledge and the mean and standard deviation of the level of knowledge of breath holding techniques on improving symptoms of respiratory disorder is 18.64±1.816.

The mean score of effectiveness

Of the breath holding techniques of the respiratory disorder patients in the pre-test was **5.98±1.220** and the mean score in the post- test was **18.64±1.816**.

NURSING IMPLICATIONS:

The study had implications for nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE:

The community area nurses must have some knowledge about breath holding techniques and take care of high risk population.

NURSING EDUCATION:

The nurse educated the general people about breath holding techniques the community settings and handling of high-risk clients. Provide a necessary health education, provide a activity therapy or routine works etc,

NURSING RESEARCH:

Numbers of studies are being conducted to assess the effectiveness of breath holding techniques on improving symptoms of respiratory disorder Nursing studies are comparatively less in this community field. Different studies have to be conducted further prevalence of infection.

NURSING ADMINISTRATION:

Nurse's administrators can make necessary steps to spread awareness about breath holding techniques Nurse's administration can organize awareness program or some participation events about black fungal infection.

RECOMMENDATIONS:

- A similar study can be conducted by large number of sample in future.
- The study was conducted to particular group of people at particular age.
- A prospective study can also be conducted

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