Research Paper

"A Study To Assess The Effectiveness Of Structured Teaching Program On Prevention Of Gastroesophageal Reflux Disease Induced Asthma Among Patients Visiting Medical And Surgical OPD In SMVMCH At Puducherry"

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ABSTRACT

GERD can trigger asthma symptoms. GERD is more common in people with asthma than in the general population. Individuals whose asthma is especially hard to treat appear to be more prone to GERD than other affected persons. Lifestyle and home remedies are helps to reduce the symptoms of GERD induced asthma. Because certain medications can be ineffective in treating GERD and asthma simultaneously, the best treatment for these conditions may consist of lifestyle and home remedies. To controlling GERD symptoms. In this paper, we discuss knowledge regarding effectiveness of structured teaching program on prevention of GERD induced asthma among patients and maximize the health outcomes of patients. The main study was conducted at SMVMCH, Puducherry. The period of data collection was 1 week, and the data were collected from the 30 OPD patients by using knowledge questionnaires. Purposive sampling technique was used. In pre-test Majority of the patients 16(53%) had inadequate level of knowledge, 8(26%) had moderate and 6(20%) had adequate level of knowledge. The mean and standard deviation of Gastroesophageal reflux disease induced asthma among patients is (9.66 ± 4.86). In post-test Majority of the patients 23(77%) had adequate level of knowledge, 5(17%) had moderate level of knowledge, and the effectiveness in pre-test and post-test in structured teaching program on prevention of gastroesophageal reflux disease induced Asthma among patients visiting medical OPD, surgical OPD and pulmonary OPD in SMVMCH at Puducherry is (18.3 ± 4.65) respectively. The study shows that, majority of the patients have inadequate level of knowledge before teaching in prevention of gastroesophageal reflux disease induced asthma.
Keywords: GERD, Asthma, structured teaching program, OPD patients .

I. INTRODUCTION

Gastroesophageal reflux disease (GERD) or gastro-oesophageal reflux disease (GORD) is a chronic condition in which stomach contents and acid rise up into the oesophagus, resulting in symptoms and complication. Asthma is a disease of increased responsiveness of the airways to various stimuli including allergens and irritants that cause obstruction of the airways.

Asthma is a disease of increased responsiveness of the airways to various stimuli including allergens and irritants that cause obstruction of the airways.

The association between gastroesophageal reflux disease (GERD) and asthma is well accepted. The prevalence of GERD increases in asthmatics compared with normal controls, whereas GERD may induce or exacerbate asthma. They interact with each other in a cause and effect relationship. But the mechanism by which GERD might induce or aggravate asthmatic symptoms remains unclear.

Actually cause of gastroesophageal reflux disease are often unknown; however, physicians do know that a variety of factors can increase your risk for developing this problem. These factors include, Excessive use of alcohol, obesity, pregnancy, smoking, hiatal hernia (in which part of the stomach rises into the chest).

GERD can trigger asthma symptoms. GERD is more common in people with asthma than in the general population. Individuals whose asthma is especially hard to treat appear to be more prone to GERD than other affected persons. Generally speaking, reflux may cause asthma symptoms in two ways. The stomach acid that leaks back into the esophagus creates a chain reaction leading to asthma symptoms.

Treatments to help manage GERD include, Avoiding eating 2-3 hours before sleeping, raising the head of the bed by 6-8 inches to elevate the upper body, as just raising the head with extra pillows is not effective, eating smaller meals and limiting large, heavy meals, particularly before sleeping, maintaining a healthy weight, avoiding smoking, dietary changes may also help, and people may need to avoid: acidic foods, such as citrus fruits, fried foods, fatty foods, spicy foods, chocolate, caffeine, mint, alcohol. Lifestyle and home remedies are helps to reduce the symptoms of gerd induced asthma.

AIM OF THE STUDY
The aim of the study was to assess the effectiveness structured teaching program on prevention of gastroesophageal reflux disease induced asthma.

STATEMENT OF THE PROBLEM:
A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURRED TEACHING PROGAM IN PREVENTION OF GASTROESOPHAGEAL REFLUX DISEASE INDUCED ASTHMA AMONG PATIENTS VISITING MEDICAL OPD, SURGICAL OPD IN SMVMCH AT PUDUCHERRY.

OBJECTIVE
❖　　To assess the knowledge towards GERD and asthma among patients visiting medical OPD, Surgical OPD and pulmonary OPD.
❖　　To associate the level of understanding on pre-test and post-test regarding risk of gastroesophageal reflux disease induced asthma among patients with their selected demographic variables.

ASSUMPTION:
❖　　The tool prepared for the study will be sufficient for collecting information on risk of gastroesophageal reflux disease induced asthma among patients
❖　　There may be decreased knowledge of patients regarding the risk of gastroesophageal reflux disease induced asthma

II.　　REVIEW OF LITERATURE:
Xiaoquan Huang, (2022) A systematic search of EMBASE, SCOPUS, PubMed, and the Cochrane library central was performed. All original studies reporting outcomes in GERD patients who underwent TIIF were identified. Only randomized controlled trials (RCTs) evaluating the efficacy of TIF, and prospective observational studies reporting outcomes after TIF were included. A total of 18 studies (963 patients) published between 2007 and 2015 were identified, including five RCTs and 13 prospective observational studies. The pooled relative risk of response rate to TIF versus PPIs/sham group. The esophageal acid exposure time and acid reflux episodes after TIF were not significantly improved. Proton-pump inhibitors (PPIs) usage increased with time and most of the patients resumed PPIs treatment at reduced dosage during the long-term follow-up. The total satisfaction rate after TIF was about 69.15% in 6months. The incidence of severe adverse events consisting of gastrointestinal perforation and bleeding was 2.4%.

Robert Baird, (2021). Five questions were addressed by searching the MEDLINE, Cochrane, Embase, Central, and National guideline clearinghouse databases using relevant search terms. Consensus recommendations were derived for each question based on the best available evidence. There was insufficient evidence to formulate recommendations for all questions. Fundoplication does not affect the rate of hospitalization for aspiration pneumonia, apnea, or reflux-related symptoms. Fundoplication is effective in reducing all parameters of esophageal acid exposure without altering esophageal motility. Laparoscopic fundoplication with regard to short-term clinical outcomes. Partial fundoplication and complete fundoplication are comparable in effectiveness for subjective control of GERD. Fundoplication may benefit GERD patients with asthma but may not improve outcomes in patient with neurologic impairment or esophageal atresia. Overall GERD recurrence rates are likely below 20%.

III.　　METHODOLOGY
The research approach used for this study was quantitative research approach. A descriptive research design was used to assess the risk of gastroesophageal reflux disease induced asthma among patients visiting medical OPD, Surgical OPD at SMVMCH, Puducherry. By using purposive sampling technique 30 sample was selected for the present study. The tool consists of demographic data and questionnaire.

DESCRIPTION OF TOOL:
The tool used for this study consists of 2 sections namely.
 SECTION A: Socio demographic Variables: Age, gender, Religion, educational Status, occupational Status, marital Status, dietary habits, bad habits.

SECTION B: Multiple choice questionnaire regarding risk of gastroesophageal reflux disease induced asthma among patients visiting medical Surgical and pulmonary OPD at SMVMCH, Puducherry.
In this study knowledge questionnaires were used, consists of 30 items.

SCORING INTERPRETATION:
PRE-TEST

LEVEL OF KNOWLEDGE	SCORING	PERCENTAGE
Inadequate knowledge	0-10	16(53.3%)
Moderate knowledge	11-20	8(26%)
Adequate knowledge	21-30	6(20.7%)

POST-TEST

LEVEL OF KNOWLEDGE	SCORING	PERCENTAGE
Inadequate knowledge	0-10	2(6%)
Moderate knowledge	11-20	5(17%)
Adequate knowledge	21-30	23(77%)

RESEARCH DESIGN:
A structured teaching program was adapted for this study.

RESEARCH SETTING :
          The study will be conducted at Sri Manakula Vinayagar Medical College and Hospital, It is a 1050-bedded hospital in Puducherry. The population of the study is patients who visiting medical and surgical OPD at SMVMCH, Puducherry. sample size is the number of subjects involved in the study. sample size consists of 30 OPD patients. Sampling refers to the process of selecting a portion of the population to represent the entire population. Purposive sampling technique was chosen as a sampling technique.

RESEARCH APPROACH:
A quantitative research approach was adapted for this study.
POPULATION:
The population for this study comprises of the risk of GERD induced asthma patients visiting medical OPD, Surgical OPD at SMVMCH, Puducherry.
SAMPLE:
The study samples consist of all the risk of GERD induced asthma patients visiting Medical OPD, Surgical OPD at SMVMCH, Puducherry who full fill the inclusion criteria.
SAMPLE SIZE:
Sample size consists of 30 patients visiting medical OPD, Surgical OPD at SMVMCH, Puducherry
SAMPLING TECHNIQUE:
In this study a purposive sampling technique were used for selecting the samples.
SAMPLE SELECTION CRITERIA:.
Inclusion criteria:
➢   Patients who are willing to participate in data collection
➢   Patients who having asthma at the time of data collection
Exclusion criteria:.
➢   Patients not willing to participate in the study.
➢   Patients who having diseases other than GERD and asthma

DATA COLLECTION PROCEDURE
          The data collection done with the permission to conduct the study was obtained from authorities of the concerned person of Sri Manakula Vinayagar Medical college and Hospital , Puducherry. 30 OPD patients were selected by using convenience sampling techniques and according to the inclusion and exclusion criteria and

after introducing and explain the purpose of the study. The tool consists of demographic variables and knowledge questions were administered to respondents and data was collected.

IV.   RESULTS:

• The findings shows that before teaching Majority of the patients 16(53.3%) had inadequate level of knowledge, 8(26%) had moderate and 6(20.7%) had adequate level of knowledge. The mean and standard deviation of level of knowledge regarding understanding of gastroesophageal reflux disease induced Asthma among patients visiting medical surgical and pulmonary OPD in SMVMCH at Puducherry before teaching is (9.66 ± 4.86) respectively.

• After teaching Majority of the patients 2(6%) had inadequate level of knowledge, 5(17%) had moderate and 23(77%) had adequate level of knowledge. The mean and standard deviation of level of knowledge regarding understanding of gastroesophageal reflux disease induced Asthma among patients visiting medical surgical and pulmonary OPD in SMVMCH at Puducherry after teaching is (18.3 ± 4.65) respectively.

• Out of 30 patients who were interviewed, Majority of the patients 13(43.3%) of study population were in the age group are 31-40 years. Equal male and Female patients were there 15(50%). Most of the patients were Hindu 24(80%). Most of the patients were Primary education and secondary education 8(26.7%). Most of the patients were Rural 18(60%). Most of the patients were Married 22(73.3%). Most of the patients were in Private Job 12(40%). Most of the patients were in joint family 22(73.3%). All of the patients were not have any history of covid 19 and asthma before 21(70%).

Frequency and percentage wise distribution of demographic variables among patients.
(N=50)

SL. NO	DEMOGRAPHIC VARIABLES		FREQUENCY (N)	PERCENTAGE (%)
1	**Age**			
		A) 20-30 years	4	13.3
		B) 30-40 years	13	43.3
		C) 40-50 years	8	26.7
		D) >50 years	5	16.7
2	**Sex**			
		A) Male	15	50
		B) Female	15	50
		C) Transgender	0	0
3	**Religion**			
		A) Hindu	24	80
		B) Muslim	4	13.3
		C) Christian	2	6.7
		D) Others	0	0
4	**Education**			
		A) Illiterate	6	20
		B) Primary school	8	26.7
		C) Secondary school	8	26.7
		D) Graduated	8	2.6
5	**Job type**			
		A) Government job	5	16.7
		B) Private job	12	40
		C) Own business	8	26.7
		D) Unemployed	5	16.6

| 6	**Marital status**		
	A) Unmarried	6	20
	B) Married	22	73.3
	C) Divorced	2	6.7
7	**Type of family**		
	A) Nuclear	6	20
	B) Joined family	22	73.3
	C) Single	2	6.7
8	**INCOME**		
	A) Rs.5000/-	0	0
	B) Rs.5001/- to 10000/-	6	20
	C) Rs.10001/- to 15000/-	14	46.7
	D) above Rs.15000/-	10	33.3
9	**Type of Residence**		
	A) Rural	18	60
	B) Urban	12	40
10	**Previous history of covid 19 and asthma**		
	A) Yes	9	30
	B) No	21	70

Frequency and percentage wise distribution of level of knowledge regarding risk of gastroesophageal reflux disease induced Asthma among patients visiting medical OPD, surgical OPD and pulmonary OPD in SMVMCH at Puducherry.
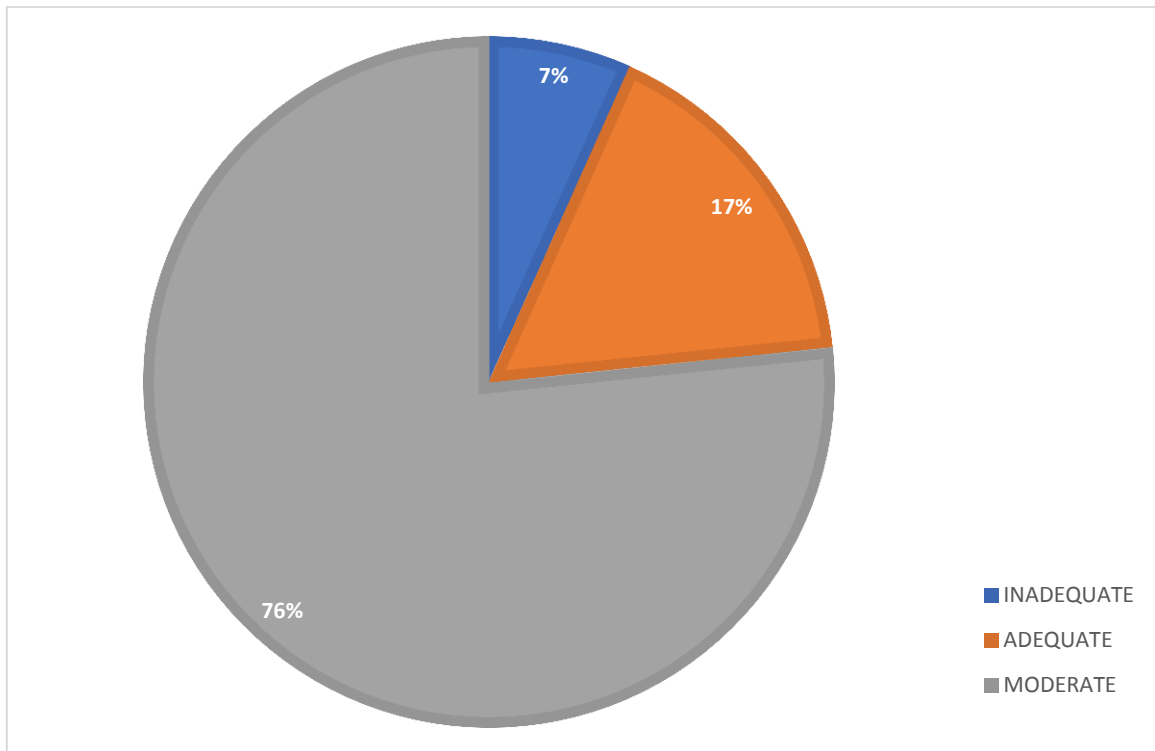
(N = 50)

LEVEL OF KNOWLEDGE	PRE TEST			POST TEST		
	FREQUENCY (n)	**PERCENTAGE%**	**Mean standard deviation**	**Frequency (N)**	**PERCENTAGE %**	**Mean standard deviation**
Inadequate	16	53.3	9.66+4.86	2	6.7	18.3+4.655
Moderate	8	27.7		5	16.7	
Adequate	6	20		23	76.7	

LEVEL OF KNOWLEDGE

PRE-TEST
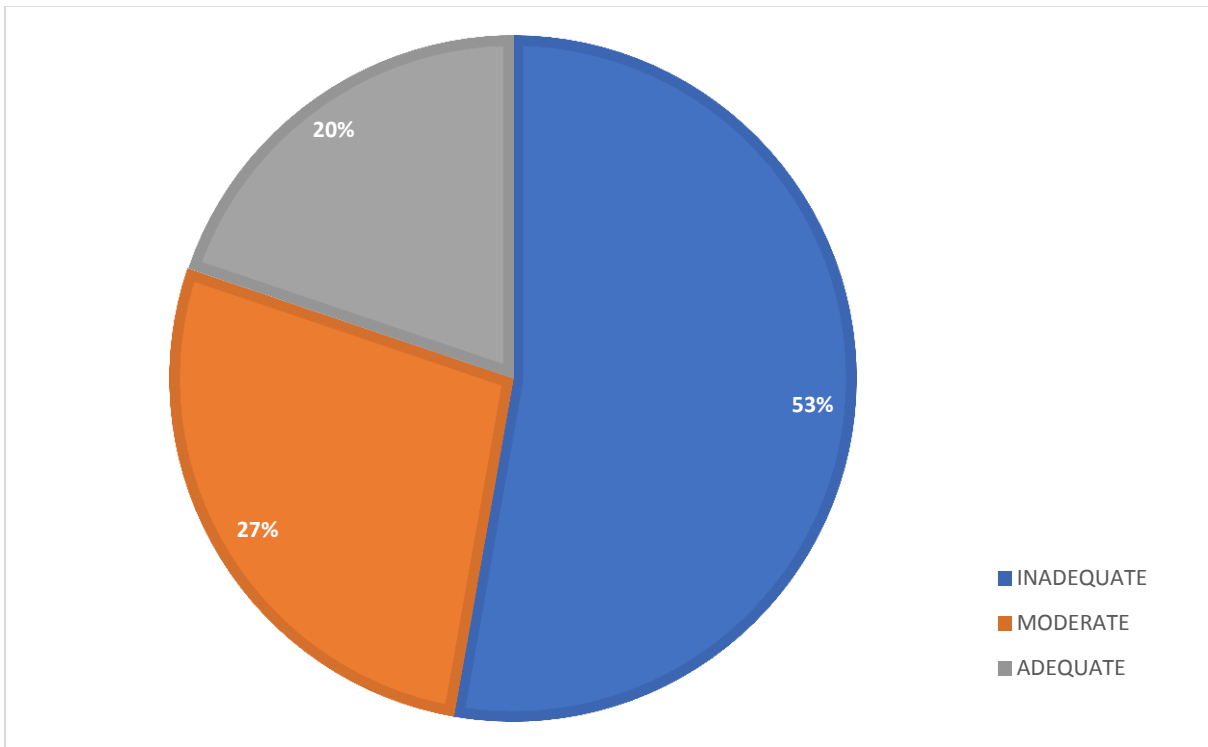
POST-TEST

Association between the level of knowledge regarding risk of gastroesophageal reflux disease induced Asthma among patients with their selected demographic variables.

(N=30)

SL. NO	DEMOGRAPHIC VARIABLES	LEVEL OF KNOWLEDGE						Chi-square X^2 and P-Value
		INADEQUATE		MODERATE		ADEQUATE		
		N	%	N	%	N	%	
1	**Age**							X^2=4.049 Df=6 p =.6700
	A) 20-30 years	0	0	0	0	4	13.3	
	B) 30-40 years	2	6.7	2	6.7	9	30	
	C) 40-50 years	0	0	2	6.7	6	20	
	D) >50 years	0	0	1	3.6	4	13.3	
2	**Sex**							X^2=.243 Df=2 p =0.8854
	A) Male	1	3.3	2	6.7	12	40	
	B) Female	1	3.3	3	10	11	36.6	
	C) Transgender	0	0	0	0	0	0	
3	**Religion**							X^2=2.457 Df=4 p =0.6524
	A) Hindu	2	6.7	3	10	19	63.3	
	B) Muslim	0	0	1	3.3	3	10	
	C) Christian	0	0	1	3.3	1	3.3	
	D) Others	0	0	0	0	0	0	
4	**Education**							**X^2=2.293 Df=6 p =0.8908**
	A) Illiterate	0	0	1	3.3	5	16.7	
	B) Primary school	1	3.3	1	3.3	6	20	
	C) Secondary school	1	3.3	1	3.3	6	20	
	D) Graduated	0	0	2	6.7	6	20	
5	**Job type**							X^2=4.368 Df=6 p =0.6269
	A) Government job	0	0	1	3.3	4	13.3	
	B) Private job	0	0	2	6.7	10	33.3	
	C) Own business	1	3.3	2	6.7	5	16.7	
	D) Unemployed	1	3.3	0	0	4	16.3	
6	**Marital status**							X^2=1.312 Df=4 p =0.8593
	A) Unmarried	0	0	1	3.3	5	16.7	
	B) Married	2	6.7	4	13.3	16	53.3	
	C) Divorced	0	0	0	0	2	6.7	
7	**Type of family**							X^2=3.837 Df=4 p =0.4285
	A) Nuclear	1	3.3	5	16.7	13	43.3	
	B) Joined family	1	3.3	0	0	8	26.7	
	C) Single	0	0	0	0	2	6.7	
8	**Income**							X^2=1.985 Df=4 p =0.7385
	A) Rs.5000/-	0	0	0	0	0	0	
	B) Rs.5001/- to Rs.10000	0	0	2	6.7	4	13.3	
	C) Rs.10001/- to Rs.15000/-	1	3.3	2	6.7	11	36.7	
	D) Above Rs.15000/-	1	3.3	1	3.3	8	26.7	
9	**Type of Residence**							**X^2=1.033 Df=2 p =0.5967**
	A) Rural	1	3.3	4	13.3	13	43.3	

	B) Urban	1	3.3	1	3.3	10	33.3	
10	**Previous history of covid 19 and asthma**							$X^2=0.621$ Df=2 p =0.7330
	A) Yes	1	3.3	1	3.3	7	23.3	
	B) No	1	3.3	4	13.3	16	53.3	

V.   CONCLUSION AND RECOMMENDATIONS:

CONCLUSION :

A study to assess the effectiveness of structured teaching program on prevention of gastroesophageal reflux disease induced asthma among patients visiting medical OPD Surgical OPD and at SMVMCH, Puducherry. The findings of the study revealed that Out of 30 samples, Majority of the patients 16(53.3%) had inadequate level of knowledge, 8(26.7%) had moderate and 6(20%) had adequate level of knowledge and the mean and standard deviation level in pre- test is (9.66 ± 4.86) respectively where the patients 23(76.6%) had adequate level of knowledge and 5(16.7%) had moderate level of knowledge and 2(6.7%) had inadequate level of knowledge and the mean and standard deviation level in post- test is (18.3 ± 4.65)

NURSING IMPLICATIONS:
The study had implications for nursing practice, nursing education, nursing administration and nursing research.
NURSING PRACTICE:
Further studies can be conducted to promote awareness regarding gastroesophageal reflux disease. A high mass health education programme can be conducted.
NURSING EDUCATION:
The nursing curriculum needs to be strengthened in order to make the nursing students to know about the gastroesophageal reflex disease.
Students should be provided with adequate opportunities for developing skills in handling such clients and how to identify the difficulties and help them to provide comfort and well being.
NURSING RESEARCH:
Numbers of studies are being conducted to assess the effectiveness of structured teaching programme on prevention of gastroesophageal reflux disease induced asthma among patients visiting medical OPD, Surgical OPD at SMVMCH. Patients are mostly inadequate in knowledge. Different studies have to be conducted further prevalence rate of GERD induced asthma among high risk population.
NURSING ADMINISTRATION:
Nurse's administrators can make necessary steps to spread awareness about prevention of gastroesophageal reflux disease by organizing mass health education or awareness program at SMVMCH.

RECOMMENDATIONS:
* A similar study can be conducted by large number of sample in future.
* The study was conducted to all kind of people at all ages visited OPD
* A prospective study can also be conducted
* Study based on daily life of clients to do their daily task.

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