



## A clinical study on therapeutic management and impact of patient counseling on asthma patients

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### ABSTRACT

An observational descriptive study was conducted in Krishna nursing home, Narasaraopet. For six months to assess the impact of pharmacist provided therapeutic management, patient education on knowledge, attitude and practice (KAP) and patient counseling in tuberculosis patients. 200 patients were taken for the study in pre-intervention 100 patients and post intervention 100 patients in study and control groups. Patient knowledge, attitude and practice questionnaire was prepared in English and translated in telugu. The patients received pharmacist provides patient education regarding drug therapy and life style modifications through the patient information leaflets (PIL) in English and Telugu. a significant was observed with the help of knowledge, attitude and practice questionnaire towards the disease. KAP was observed in paired 't' test significant was difference ( $P < 0.001$ ).

**Keywords:** Patient Education; KAP; PIL; Intervention.

### Introduction

Asthma is a chronic inflammatory disorder of the airways characterized by variable airway obstruction, airway inflammation and increased airway responsiveness to variety of stimuli. The major symptoms are shortness of breath, cough and wheezing (Leon shargel et al., 1997). Asthma can not be cured, but it can be controlled with proper asthma management. Mainly asthma management is environmental control its impact on their health (Margret chandira et al., 2009).

Collaborative approach between patient and pharmacist may improve patient medication adherence behavior and therapeutic outcomes. Role of pharmacist as asthma educator is appreciated worldwide in reducing the risk factors and improving patient knowledge.

The present study is conducted to assess the impact of pharmacist provided patient education on knowledge attitudes, and practices regarding the management of disease and overall improve the patient's education and life style modification about the disease. The patients received pharmacist provides patient education and patient information leaflets to complement verbal counseling.

### METHODOLGY

200 patients from different walks of life's were interrogated with a descriptive study. The study period was June 2010-Nov 2010. And this study was conducted in Krishna nursing home. The enrollment patient who has been diagnosed as tuberculosis was send to the clinical pharmacist by the doctors. About 200 patients those who were full filling the requirement were included in the study.

Complete demographic details, past and present medical and medication history was obtained in a suitably designed patient profile form.

To assess the Knowledge, attitudes, and Practices (KAP) of the patients towards the disease management, a suitably designed, content and translation validated Telugu version of KAP questionnaire was administered on all the enrolled patients at before and after intervention study in study and control groups.

Its risk factors completion and life style modification necessary in asthma patient. The answer knows also considered a "YES" only. The answer do not know also was considered "No" only. The subjects were asked to complete the Proforma containing the questions by themselves, but for illiterate persons the proforma were filled up by asking the questions verbally and recording their answers. An intervention based randomized study was designed to evaluated the effect of patient counseling in the study population. On an average 15-20 minutes was spending in each patient depending on their educational level and understanding capability.

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**Table 1: Age distribution Vs sex**

Age in year	Male	Female
15-24	13	4
25-34	17	5
35-44	14	7
45-54	28	9
55-64	38	15
65-74	16	6
75-84	17	2
85-94	7	2
Total	150 (75%)	50 (25%)
Mean $\pm$ S.D	18.75 $\pm$ 9.73	6.25 $\pm$ 4.01

**Table 2: Risk factors for asthma**

S.No.	Risk factor	No. of patients	percentage
1	Stress	3	1.5
2	Cold air	55	27.5
3	Air pollution	36	18
4	Animal dander	0	0
5	Pollen grains	0	0
6	Excessive exercise	11	5.5
7	Smoking	35	17.5
8	Certain food	15	7.5
9	Some drugs (aspirin, ibuprofen, beta-blockers)	0	0
10	Viral respiratory tract infections	45	22.5

**Table 3: Knowledge, attitude and practice assessment in study group before and after intervention**

S.No.	Questions	Before inter-vention	After inter-vention	Differences
1	Can you name the disease you are suffering from?	15	100	85**
2.	Do know which part of the body is affected?	22	100	78**
3.	Do you know what the causative/worsening factors of asthma are?	15	50	35*
4	Do you know what are the symptoms of asthma?	35	78	43*
5	Do you know how important to avoid the allergens?	10	28	18*
6	Do you know about the food items to be avoided?	15	38	23*
7	Do you know the importance of taking regular treatment for asthma?	10	82	72**
8	Can you identify the drugs you are taking?	03	55	52*
9	Do you know how long the medication for asthma should be taken?	00	45	45*
10	Do you know how to use inhaler?	05	66	61**
11	Do you know about the side effects of the drugs you are taking?	00	07	07*
12	Are you satisfied with the way of your medication controls your symptoms such as cough, shortness of breath, etc?	07	62	55**
	Mean $\pm$ S.D	11.41 $\pm$ 5.65	59.25 $\pm$ 26.87	
	Degree of freedom	11		
	p- value	P < 0.001		

\*\* High significance \* Significance

**Table 4: Knowledge, attitude and practice assessment in control group before and after intervention**

S.No.	Questions	Before intervention	After intervention	Differences
1	Can you name the disease you are suffering from?	22	100	78**
2.	Do know which part of the body is affected?	36	100	64**
3.	Do you know what the causative/worsening factors of asthma are?	25	70	45*
4	Do you know what are the symptoms of asthma?	58	88	30*
5	Do you know how important to avoid the allergens?	19	48	29*
6	Do you know about the food items to be avoided?	25	38	13*
7	Do you know the importance of taking regular treatment for asthma?	28	82	54*
8	Can you identify the drugs you are taking?	08	55	47*
9	Do you know how long the medication for asthma should be taken?	04	45	41*
10	Do you know how to use inhaler?	08	66	58**
11	Do you know about the side effects of the drugs you are taking?	09	15	06*
12	Are you satisfied with the way of your medication controls your symptoms such as cough, shortness of breath, etc?	2	72	70**
	Mean ± S.D	20.33±14.43	64.91±43.78	
	Degree of freedom	11		
	p- value	P < 0.001		

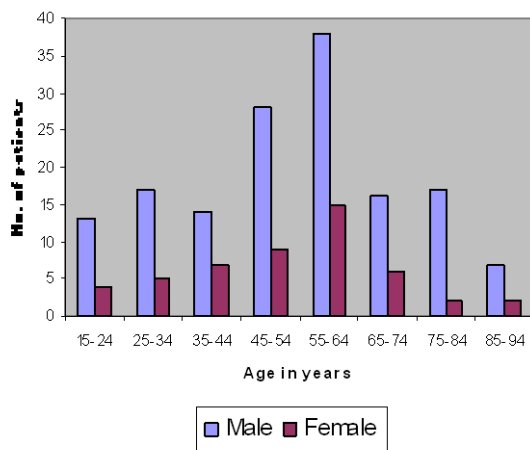
\*\*Heigh significance \*Significance

The statistical software namely SPSS and systat were used for the analysis of the data and Microsoft word and excel had been used to generate graphs, tablets etc. Paired't' test was carried out to calculate the before and after interventions study. In this study, P<0.001 considered as the statistical significant.

**RESULTS AND DISCUSSION**

**Demographic details**

A total 200 patients were taken for the study. in this 150(75%) were males with mean age of 18.75 9.73 and 50(25%) within the mean age of 6.25 4.01 asthma was higher in the age group of there were more males than females (Table-1).

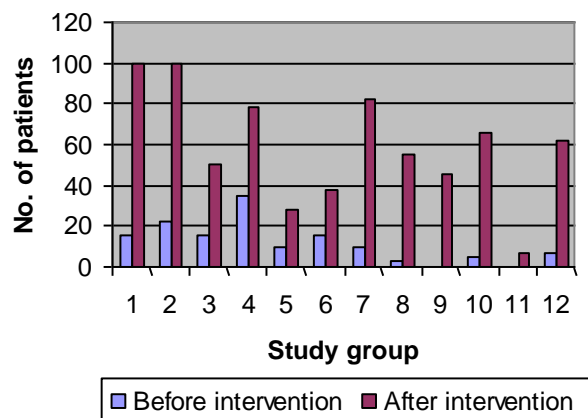


**Figure 1: Age distribution Vs sex**

**Measuring the knowledge, attitude and practice questionnaire (study and control groups)**

**Study group**

In the study group out of 12 questions 5 questions were showed higher significant and 7 questions were showed significant improvement and p- value P<0.001(Table-3) (Figure-2). It was found that the mean knowledge increase from 11.41 to 59.25.



**Figure 2: Knowledge, attitude and practice assessment in study group**

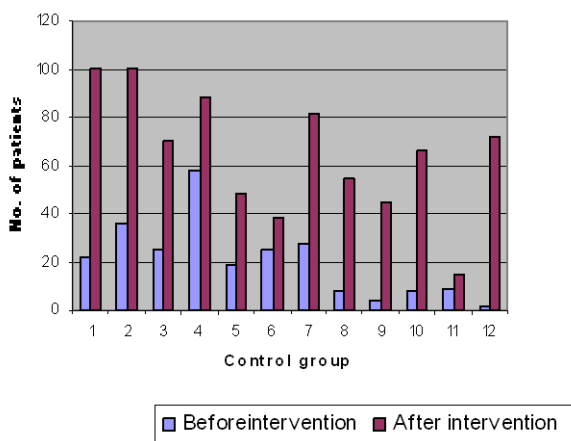
**Control group**

In the study group out of 12 questions 4 questions were showed higher significant and 8 questions were showed significant improvement. Even though signifi-

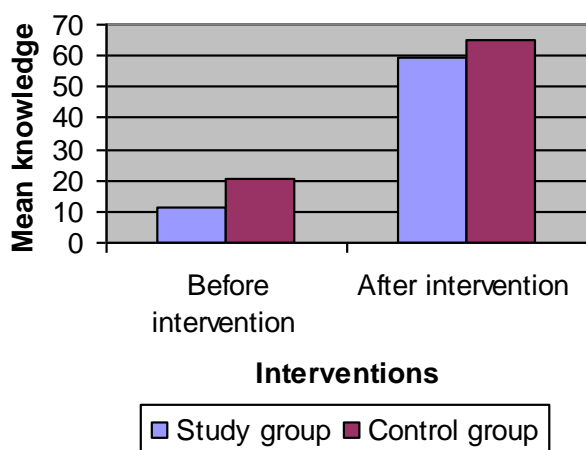
cant low because of hospital stay and patient should have more care regarding disease. The mean knowledge increases 20.33 to 64.91. (Table-4) (Figure 2).

In compared to study and control groups mean knowledge was increased (Figure-4).

Asthma management is environmental control its cold air (27.5%) impact on their health (Table-2).



**Figure 3: Knowledge, attitude and practice assessment in control group**



**Figure 4: Comparing mean knowledge between study and control group**

**CONCLUSION**

Patient education and medication counseling are the management of disease like asthma where the base line knowledge about the disease is low among the people. 200 patients were counseled regarding their knowledge, attitude and practice on management of asthma.

The number of patients who were counseled showed very large effect after counseling. Patient counseling produced significant improvement in patient’s knowledge, attitude and practice score regarding the management of asthma and thereby better therapeutic outcome. This shows that counseling does very important role in asthma.

The clinical pharmacist can play a major role in improving patient’s knowledge and adherence by patient education and by developing education materials like patient information leaflets.

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