



STUDY OF ASTHMA QUALITY OF LIFE QUESTIONNAIRE: AN INSTRUMENT FOR REVIEWING ASTHMA HEALTH EDUCATION AND PROMOTION

N. Kanaka Durga Devi*, V.Hema Suma Sree

K.V.S.R. Siddhartha College of Pharmaceutical Sciences, Vijayawada-520010 India

E-mail: nelluriss@rediffmail.com

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ABSTRACT:

Patient education is considered as an essential component in improving knowledge, attitude and practice of the patients towards disease management and improved medication adherence behavior and treatment outcomes. Role of pharmacist as a patient educator in chronic disease is well recognized in western world. The objective is to study the influence of pharmacist provided patient education on asthma patients treatment outcomes. The Methodology was a prospective study of the patients of the patients of asthma. Patients knowledge, attitude and practices towards asthma and medication usage were analyzed. Medication adherence behaviors of all the enrolled patients were assessed. The treatment outcome was assessed by using FEV₁ in spirometer. Patients of this group received education about the disease, medications and precautions to take to minimize the triggering factors. Forty six asthma patients completed the study. Significant improvement was observed in this group patients with respect to knowledge, attitude, practice. Medication adherence behavior and treatment outcomes comparatively. Pharmacist provided patient education showed a positive influence on patient's knowledge, attitude, practice, medication adherence behavior and treatment outcomes.

Key-words: Pharmacist, Patient education, Medication usage, Therapeutic outcomes.

INTRODUCTION

Asthma is a disease of airways that is characterized by increased responsiveness of the trachea bronchial tree to a multiplicity of stimuli¹. It is one of the most common chronic diseases in the world which influences individual quality of life. It is estimated that around 300 million people in the world currently have asthma. According to P.P.Guptha² and K.B.Guptha (2001) study Patient education within the context of the controlled evaluations is capable of improving knowledge and beneficially altering behavior. They suggest that patients treated by highly qualified health care professionals were found to have more knowledge about the disease, triggering factors.

It is manifested physiologically by a wide spread narrowing of the passages, which may be relieved spontaneously as a result of therapy, and clinically by paroxysms of dyspnoea, cough and wheezing. With the projected increase in the proportion of the world's population that is urban from 49% to 69% in 2025, there is likely to be a marked increase in the number of asthmatics worldwide³⁻⁵ over the next two decades. It is estimated that there may be an additional 100 million persons with asthma by 2025. According to National Family Health Survey report, the estimated prevalence of asthma in India is 2996 per 100,000 persons. Despite the advances made in the management of the disease, morbidity and mortality are still continuing to rise worldwide.

Prime reasons for prognosis are inadequate education to patients, poor adherence to the medication. Adherence to treatment and life style are the key links between treatment and its come in medical care. Studies have shown that less than 50% of asthma patients are adherent to their asthma medications and is one of the major causes of poor clinical outcomes. Studies have shown that inadequate education is identified as one of the leading causes influencing the adherence behavior⁶.

Structured patient education may be defined as the learning process that improves patients ability to cope up with the symptoms of the disease and make informed decisions

regarding their disease and medication. The main objective of the patient education is to assist the patient, in identifying and preventing the triggering factors^{7,8} like Tobacco smoke, Dust mites, Outdoor air pollution, Cockroach allergen, Pets, Mold, respiratory syncytial virus (RSV), and help them in using their medicines appropriately.

The National Heart Lung and Blood Institute (NHLBI) guideline for the diagnosis and management of asthma advocates that patient education is an essential part in asthma management. Studies also have a positive impact on treatment outcomes in terms of reducing number of hospital admissions, improved symptoms and improved medication usage techniques. Patient education is important in Indian⁹⁻¹³ setup because many patients are illiterate and come from low socio economic background.

The present study aims at the assessing the influence of community pharmacist provided health education on treatment outcomes in asthma patients. As part of the study the knowledge, attitude and practice of asthma patients towards their disease and medication usage were studied by using spirometry¹³⁻¹⁶.

MATERIALS & METHODS

This study was carried out at out patients in Kanumuri chest clinic, Vijayawada from June 2012 to Sept.2012. Adult patients with chronic stable asthma on inhaled medications were enrolled in to the study after taking the informed consent. Patients with additional co morbidities like TB, Cardiac diseases, diabetes or any other chronic illness were excluded from the study.

Patient enrollment:

The enrolled patients were randomized into different age groups and were followed before and after the follow up.

Diagnosis:

Diagnosis of asthma was confirmed by demonstrating a reversibility of 12% or FEV₁ > 200ml after 4 puffs of salbutamol a β_2 agonist according to ATS guidelines. (FEV₁ = forced expiratory volume I one second)

Knowledge, Attitude and Practice (KAP) assessment:

Validated KAP questionnaire was administered to assess the patients perceptions about the disease, medications . the questionnaire was administered to patients at the base line and at the final follow up.

Pulmonary function tests:

Lung function of the study subjects was assessed by spirometer, which was done at baseline and at the final follow up. From the spirometry FEV₁ values were used to assess the treatment outcomes.

Patient Education:

Structured patient education was developed for the study purpose included both verbal and printed information about the disease. Education was provided to all the patients after the base line. Structured patient education included about the disease, medications, life style modifications required for the better management of the disease required for better management of the disease.

RESULTS:

A total number of 46 asthma patients met the inclusion criteria.

Demography: Out of 46 patients, there were 25 (54.3%) males and 21 (45.7%) females, by this males were more in number when compared to females. The statistical details of the patients enrolled regarding age, gender, education,

smoking history, duration of asthma given in **Table.1** and **Fig.1**.

Analysis of knowledge, Attitude and Practice results:

The analysis of KAP results was assessed by the percentage of patients answering correctly at base line and at the final follow up. A higher percentage improvement of knowledge, attitude and practices of patients was observed comparatively which is shown in **Table. 2** and **Figs. 2, 3, 4**.

Table .1 : Demographic details of the patients

Demographics(n=46)	percentage
Age in years	
Above 40	58.6
Between 20-40	32.6
Below 20	8.8
Sex	
Male	54.3
female	45.7
Education	
Schooling	50
Preuniversity	36.9
university	13.1
Smoking	
Smoker	10.9
Non smoker	89.1
Duration	
<8yrs	26.08
>8yrs	73.92
Reversibility	54.8

Fig.1 : Demographic studies

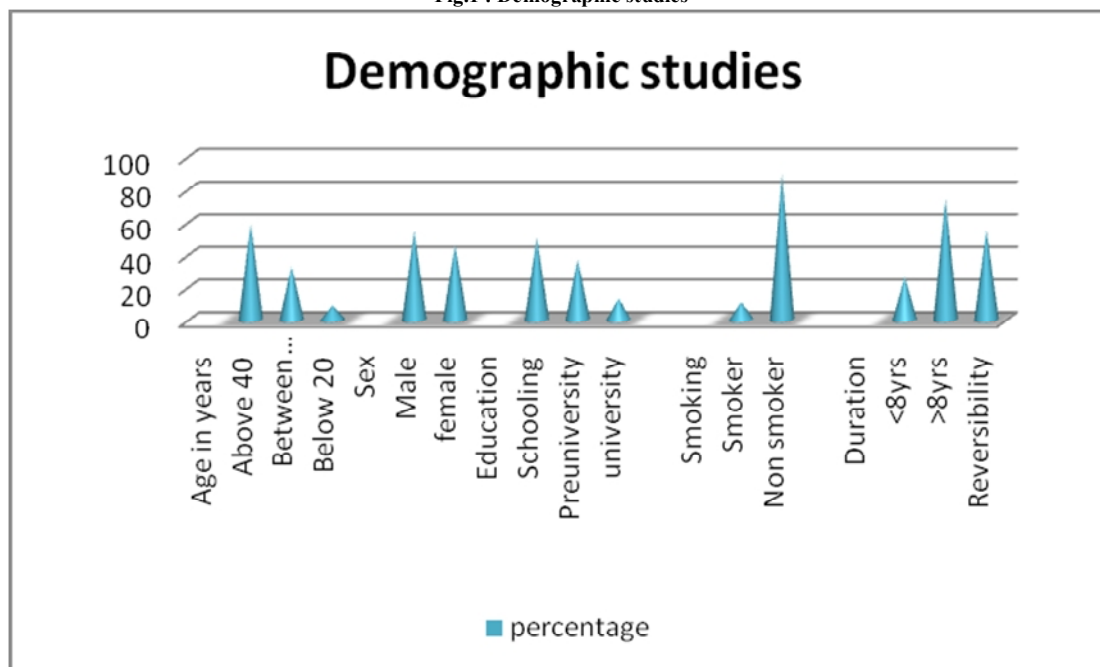


Table 2 : Knowledge, attitude and practice assessment

Sl no	Questions	% of patients answered correctly (%) KAP at base line (n=46)	% of patients answered correctly (%) KAP at final follow up (n=46)	% improvement (n=46)
1	Do you know which part of the body is affected in asthma?	41.3	75.8	34.5
2	What happens to a person during an asthma attack?	47.8	90.6	42.8
3	Can you name the signs and symptoms of asthma?	45.6	87.9	42.3
4	Can you name the causes of asthma?	36.9	89.6	52.7
5	Do you think asthma is a contagious disease?	54.3	35.8	-18.5
6	Do you think asthma is a curable disease?	39.1	97.8	58.7
7	Do you think knowing about your disease condition is important to you?	45.6	86.5	40.9
8	Are you taking any medications for your disease?	47.6	82.3	34.7
9	What type of medications are you receiving for your asthma?	35	85	50

10	Do you think taking asthma medications regularly is important to you?	45.6	96.3	50.7
11	Do you receive any advise regarding the proper usage of medication from any one?	47.8	95.3	47.5
12	Do you have any worries about side effects of your medications?	43.4	23.2	-20.2
13	Which form of the treatment do you feel comfortable with?	40	90	50
14	If you are using meter dose inhaler, do you shake the canister before taking puff?	36.9	69.8	32.9
15	If you are using a meter dose inhaler/ rotahaler, do you wash your mouth after inhalation?	32.6	89.9	57.3
16	Do you purchase all the medicines on prescription at once?	34.7	79.8	45.1
17	Do you take your medication regularly as advised by your physician?	32.6	96.1	63.5
18	Do you skip your medications?	30.4	19.2	-11.2

Fig. 2: knowledge, Attitude and patient assessment

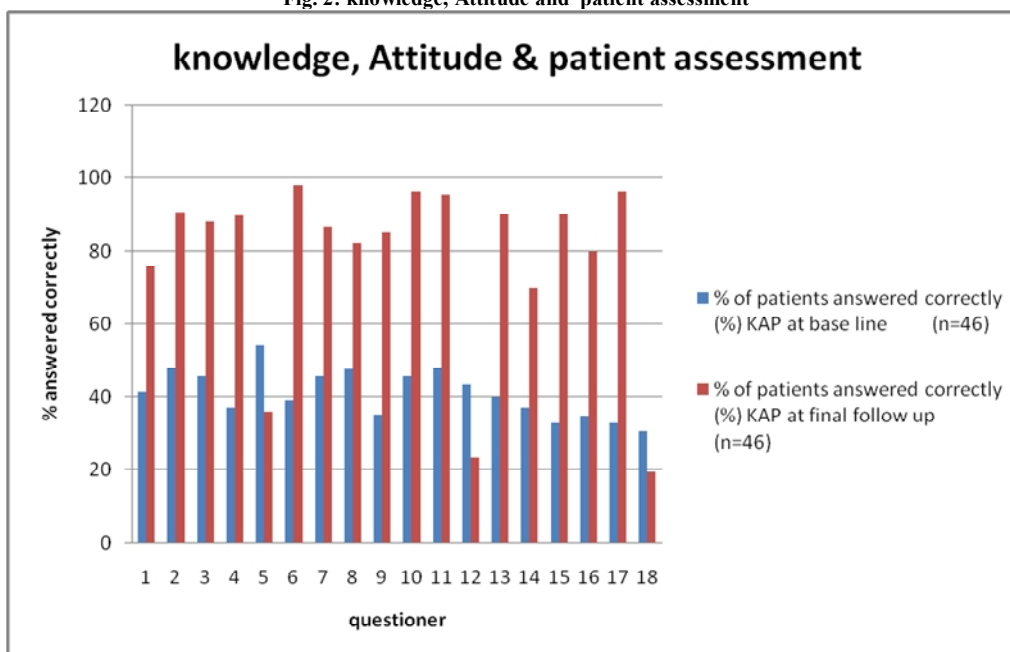


Fig.3: % of patients answered correctly (%) KAP at base line (n=46)

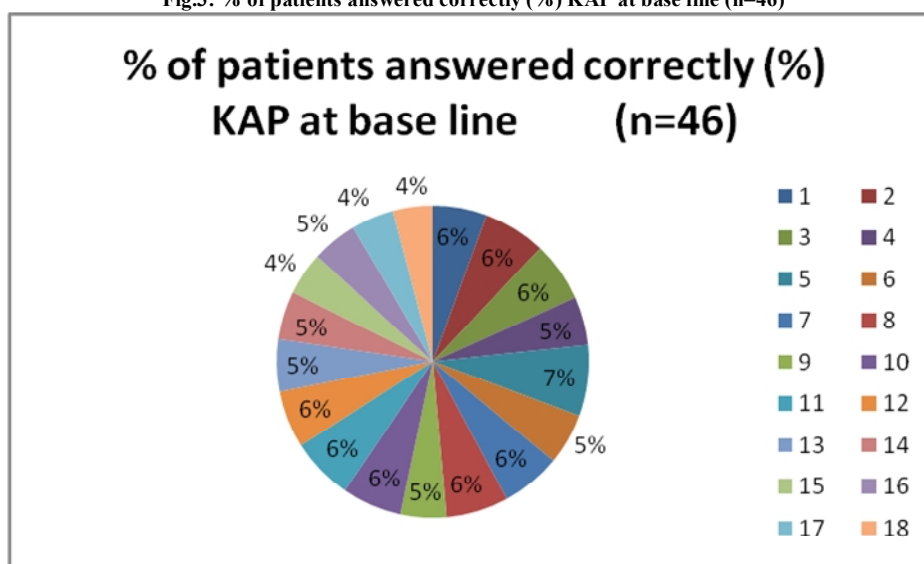
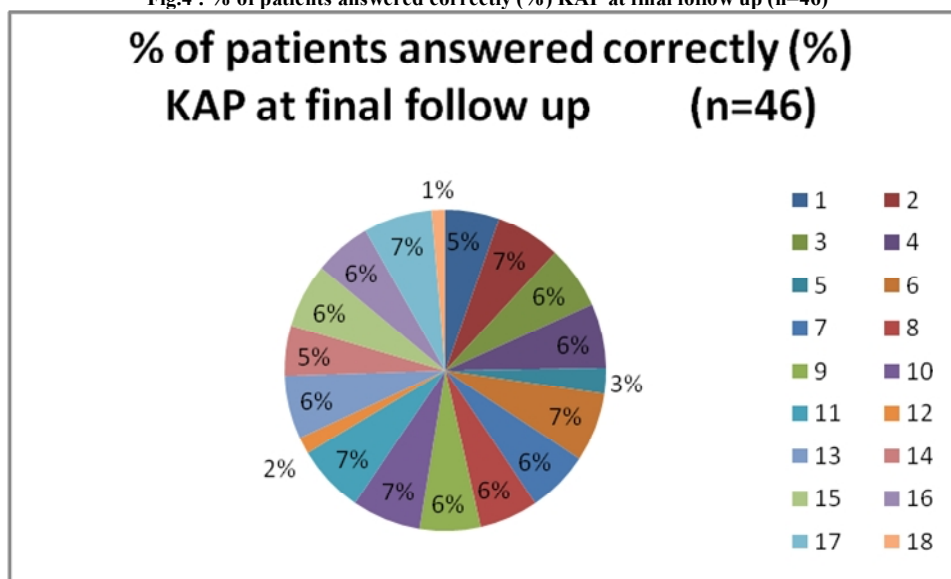


Fig.4 : % of patients answered correctly (%) KAP at final follow up (n=46)



DISCUSSION:

The results of KAP suggest that patients at the baseline possess poor knowledge, attitude and practice on disease and its management. This may be due to inadequate information about the disease and patients poor interest to know about their disease management.

In the present study, the poor awareness of the patients at the baseline towards the disease and its management can be attributed to inadequate information provided by the health care professional. At the final follow up, the percentage improvement of KAP was increased in patients comparatively. This is because of pharmacist provided patient education to the patients. This results suggest that, education provided by health care professional has a positive influence on patients disease management attitude.

Patient education within the context of the controlled evaluations is capable of improving knowledge and beneficially altering behavior. These results suggest that patients treated by highly qualified health care professionals were found to have more knowledge about the disease, triggering factors which were similar to the observations made by P.P.Guptha and K.B.Guptha study.

From **Table.1**, it showed the details of the persons considered were given like regarding age whether they were above 40yrs/between 20-40/ below20yrs, sex (male/ female), education (schooling, preuniversity, university), smoker or non smoker, duration >8yrs / <8yrs and reversibility which is also clearly represented in **Fig. 1**.

From **Table.2**, the various questionnaire were raised to 46 patients and from the answers they have given statistical data is prepared and represented in **Fig.3**. And after a certain period and in the mean while the patients were given proper information regarding the disease and the same questionnaire were raised and the increase in correctly answering % was seen and shown in the **Table.2** and **Fig. 4**.

All the questionnaire results were increased in a positive manner and question no. 5, 12, 18 were decreased but it is a positive result shown in **Table.2**.

CONCLUSION:

The study concludes that pharmacist provided structured patient education found to have significant influence on improvement in the knowledge, attitude and practices of asthma patients towards the management of the disease.


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REFERENCES:

- Hilton. S Sibbald., Anderson H.R and Freeling P. Controlled evaluation of the effects of patient education on asthma morbidity in general practice. *Lancet*.1986; 1 : 26-29.
- Prem Prakash Gupta and K.B.Gupta. Awareness about the disease in asthma patient receiving treatment from physicians at different places. *The Indian journal of chest diseases and Allied sciences* 2001; 58(2): 1-6.
- Theresa L Charrois, Stephen C Newman, Ambikaipakan Senthilselvan and Ross t psuyuki. Improving asthma control in rural setting. *The BREATHE study. Canadian pharmacy journal*. 2006 ; 139 (4): 44-50.
- Kauppinen, R., V. Vikka, et al. (2001). "Long term economic evaluation of intensive patient education during the first treatment year in newly diagnosed adult asthma". *Respiratory Medicine* 95(1): 56-63.
- Opat, A. J.,M.M. Cohen, et al.(2000). " A clinical trial of the Buteyko Breathing Technique in asthma as taught by a video." *Journal of asthma* 37(7): 557-564.
- Gupta D, Agarwal AN, Kumar R, Jindal SK. Prevalence of bronchial asthma and association environmental tobacco smoke exposure in adolescent school children in Chandigarh, North India. *J Asthma* 2001; 38:501-507.
- Ines. K, Susan J. Jailor, Carlene smith, Carol L. Armour. Impact on Medication Use and Adherence of Australian Pharmacists: Diabetes Care Services. *J Am Pharma Association* 2005, 45: 33-40.
- WHO. Pharmacovigilance: Ensuring the safe use of medicines, WHO policy perspective of medicine. Geneva: WHO; 2004. p. 1222-39.
- WHO. Requirements for adverse drug reaction reporting. Geneva: World Health organization; 1975. p. 1039-109.
- Kallergis EM, Manios EG, Kanoupakis EM, Schiza SE, Mavrakakis HE, Klapsinos NK. Acute electrophysiologic effects of inhaled salbutamol in humans. *Chest* 2005;127:2057-63.
- Grootheest KV, Berg LJ, Puijjanbrok EP. Do pharmacist reports of adverse drug reactions reflect patient concern? *Pham World Sci* 2004;26:155-9.
- Garg KC, Singhal KC, Kumar S. Monitoring the adverse profile of atenolol a collaborative study. *Indian J Physiol Pharmacol* 1993;37:213-6.

13. Afandi B, Toumeh MS, Saadi HF. Cushing's syndrome caused by unsupervised use of ocular glucocorticoids. *Endocr Pract* 2003;9:526-9.
14. Groothest KV, Berg LJ, Puijanbrok EP. Contribution of pharmacist to the reporting of ADR. *Pharmacoepidemiol Drug Saf* 2002;11:205-10.
15. Bajaj A, Balakrishna S, Sawarkar S. Assessment of therapeutic performances of inhalation aerosols and clinical pharmacist's services in PFT lab. *Indian J Hosp Pharm* 1999;36:138-42.
16. Groothest KV, Olsson S, Couper M, Berg LJ. Pharmacist role in reporting adverse reaction in an international perspective. *Pharmacoepidemiol Drug Saf* 2004;13:457-64.

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