



EFFECT OF ASTHMA EDUCATION ON KNOWLEDGE AND QUALITY OF LIFE OF PATIENTS RESIDING IN A SELECTED TALUK

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ABSTRACT

Asthma education is corner stone in asthma management which plays a pivotal role in reducing the burden associated with disease. The aim of the study was to identify the effect of an asthma information booklet on knowledge of asthma and quality of life of patients residing in a selected taluk. Nineteen patients were randomised in to experimental group and control group and the outcomes of interest were measures at 60th and 120th days after introducing information booklet. Experimental group demonstrated significant improvement in knowledge and quality of life at post points of contact. Gender and duration of disease were found to be associated with quality of life of patients where as education was associated with knowledge of patients about asthma.

KEYWORDS : Asthma Education, Information booklet, Knowledge, Quality of life

INTRODUCTION

Asthma is one of major public health burden affecting the lives of several million people across the globe. The prevalence of asthma increases 50% in every decade and is estimated that there will be 400 million asthmatics in the World by 2025.¹ Even though standardised data are not available, the adult asthma prevalence in Indian Subcontinent is estimated as less than 5 percentages.² The burden associated with asthma is very much related to the knowledge of patients about their disease. Asthma education which is an integral component in Western health care is very much scattered in our health care system due to over crowded outpatient departments, lack of time and manpower for health personnel and also due to absence of specific guidelines. One of the important yard stick to measure the burden of asthma is measuring quality of life of patients. The empowerment of patients with knowledge about a disease will help patients to manage their disease effectively, thus may able to improve quality of life. A multi centre prospective cohort study on 536 Spanish asthma patients over 12 months pointed out that symptom control and patient education on asthma were two important modifiable factors that have an impact on their quality of life.³ The purpose of this study was to evaluate the effect of asthma education on knowledge and quality of life of patients residing in a selected taluk of Kerala.

MATERIALS AND METHODS

Twenty two patients between the age group of 20-60 years, residing in Thodupuzha Taluk of Kerala, who had at least 5 hospital contacts for last 3 months as per the hospital register maintained in the respiratory physician's office were randomly recruited for the study. An experimental design- pre-test post-test control group design with repeated follow-ups was adopted to test the efficacy of asthma education on knowledge and quality of life among asthma patients. Randomly selected twenty two patients were equally randomised in to experimental and control group and of this 19 were completed the study.

The asthma education designed for the study was an information booklet Asthma information booklet, which is a 32 paged patient and family education booklet contains information on nature of asthma, treatment as well as an asthma action plan.

Tools used for this study were a 30 itemed structured questionnaire and a standardised 32 itemed asthma quality of life questionnaire prepared by Professor Elizabeth Juniper. Eighteen items were multiple choice questions with one correct response, and 12 items were true or false questions. Apart from item on asthma symptoms,

each correct response was awarded a score of 1 where as for item on asthma symptoms each correct symptom was awarded a score of 1 and the total score for this item was 4. Total knowledge score was 33 and the knowledge level of the patients were interpreted as follows. Reliability of structured knowledge questionnaire was assessed by test retest method and it was 0.94

Score of less than 17 in asthma structured questionnaire is considered as poor knowledge, score of 17- 25 is considered as moderate knowledge and score greater than 25 is considered as good knowledge.

The major domain in AQLQ was symptom domain, activity limitation domain, emotional function domain and environmental stimuli domain. For scoring and interpretation of AQLQ, individual items are equally weighted. The overall AQLQ score is the mean of the responses to each of the 32 questions. The resultant score is between 1 and 7. The reliability of the tool was estimated by interclass correlation coefficient and it was 0.95

Duration of data collection was 6 months from June 2016 to November 2016. During the initial home visit pretest was conducted on eligible participants and their quality of life was also assessed. Information booklet was given to patients in the experimental group and post test knowledge and quality of life were assessed at 60th day and 120th day after intervention. The data was analysed using descriptive statistics and the inferential statistics employed were chi square test, independent t test and paired t test.

RESULTS

Descriptive information

Among 22 participants 19 (10 from experimental and 9 from control group) were completed the study, of them 14 were females and five were males. Eight of the patients have studied till matriculation.

Fourteen patients reported family history of asthma and eighteen of them have history of allergy. Smoke and common cold were major triggers of asthma for the participants (89%)

Table 1: Comparison of pre tests and post tests responses of patients on selected items.

Sl no	Item	Correct respondents in pretest	Correct respondents in post test 1	Correct respondents in post test 2
1.	Nature of airways of asthma patients	11	15	16

2.	Most important steps in controlling asthma	2	7	8
3.	Role of long term asthma medicines	5	8	10
4.	Role of reliever medicines in asthma	4	11	11
5.	Immediate patient's response after inhalation	7	13	14
6.	Important instrument in diagnosing asthma	6	10	12
7.	Inhalers as less side effected asthma medicines	6	15	15
8.	Asthma is curable by treatment	3	11	10
9.	Need of taking long term medicines in absence of asthma	4	12	12
10.	Change of geographical area may cure asthma.	4	10	11

The mean pretest score and two post tests score for Asthma Quality of Life for pretest posttest1 and posttest2 were 3.967, 4.395 and 4.51 respectively.

Inferential information

Effect of education on knowledge and quality of life of asthma patients

Paired t test was used to compare the mean of pre-test of selected variables with their mean of post test 1 and post test 2. The level of significance was set at 0.05 (Table 2)

Table 2: Level of significance between selected paired variables in experimental and control group

Paired variables	Level of significance in experimental group (n=10)	Level of significance in control group (n=9)
Pretest knowledge-Post test knowledge 1	0.000	.622
Pretest knowledge-Post test knowledge 2	0.000	.464
Pretest Quality of life – Post test 1 Quality of Life	0.08	0.568
Pretest Quality of life – Post test 2 Quality of Life	0.03	0.788

Association between demographic variables and outcome variables

Chi square test was used to find out the association of selected demographic variables with levels of knowledge and quality of life. There was significant association between pre test knowledge, quality of life and selected variables such as educational status, gender, and duration of asthma

DISCUSSION

Significant improvement in knowledge level and quality of life were found among patients who received asthma education where as in control group there was no significant difference between pre tests and post tests. The result of the study is congruent with one non experimental prospective cohort study conducted at Amrita Hospital Kerala which showed asthma education was key in improving knowledge and quality of life of asthma patients.⁴ An educational interventional study conducted at V.P Chest Institute Delhi also support the findings of the.⁵

In this study smoke, common cold and weather changes were reported as common trigger for asthma symptoms. A survey reported by Asthma Insight Management in Asia Pacific region also showed smoke and strong odours as well as change in weather as common triggers of asthma⁶ A retrospective study from Udappi Karnataka found dust and pollen were the major allergens among asthma patients.⁷

Educational status has significant association influence on pretest knowledge of the patients; where as gender and duration of asthma have association with quality of life. A survey among 100 mothers of asthmatic children at a medical college Kerala showed mothers with

higher education had better knowledge on asthma.⁸ A Serbian study on 60 non atopic asthmatics showed duration of illness and age were two predominant factors in determining the quality of life and a study from Netherland also showed women have lower quality of life.⁹

Worldwide epidemiological studies showed asthma incidence, prevalence and severity were higher among adult women than that of men.¹⁰ National Family Health Survey 2005-2006 estimated the prevalence of self reported asthma in India was 1.8% among men and 1.9% among women.¹¹ In this study only 5 participants were male. One of the major reasons for the less representation of males in this study is due to the exclusion criteria of current smokers.

The results of this study suggests asthma education will significantly improve knowledge and quality of life of patients.

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Conflict of interest

Nil

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