

To Assess the Impact of Structured Education Regarding Asthma in Selected Area of Chitradurga City

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ABSTRACT

Background: Asthma is a chronic inflammatory disease of airways characterized by recurrent attacks of shortness of breath associated with wheezing and may get worse during physical activity or at night time. The prevalence of asthma is increasing globally.

Objectives: To assess and improve the knowledge of Asthma among the study subjects.

Methodology: A prospective observational study was carried out for a period of six months in selected area of Chitradurga city.

Results: Out of 208 subjects 105 were females and 103 were males. In that 79(38%) were studied on 9th standard and 129(62%) were of 10th std. students of 13-16 years were participated in the study and most of them have poor knowledge during pretest and after the counseling their knowledge has been improved. In this study 126 were know what asthma is and in post-test 193 were given the correct answer and regarding the organ of body is affected 156 were know about it in pre-test and after post-test it is increased into 194 subjects. In this study 70 have knowledge about the signs and symptoms in pre-test and 174 were answered correctly in post-test. Most of them have poor knowledge during pretest and after the counseling their knowledge has been improved.

Conclusion: On the basis of the above discussion it can be concluded that the asthma is a major health problem across the world in prevalence and severity. In Chitradurga city triggering factors such as dust, animal allergen and pollution is more so there is a high risk of asthma.

Key words: Knowledge regarding asthma, triggering factors.

INTRODUCTION

Asthma is a chronic inflammatory disease of airways characterized by recurrent attacks of shortness of breath associated with wheezing and may get worse during physical activity or at night time. The prevalence of asthma is increasing globally. [1]

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 1, 00,000 persons. [2] Current treatment guidelines for asthma emphasize the importance of patient education to asthmatics. [3]

The World Health Organization recognizes asthma as a major health problem. Asthma can occur at any age but children and young adults are the commonly affected age groups. Although asthma cannot be "cured," clinical episodes can largely be prevented and controlled by proper management. [4]

Asthma has been identified as a major contributor to chronic disease, knowledge in the general population for its management is very crucial. Asthma can occur at any age but its onset is predominantly observed in children and adolescents. The parents of such children are one of the important factors in the prevention and management of asthma exacerbations. Adequate knowledge of asthma management in a parent is essential for the prevention of asthma exacerbations in his/her child. [5]

The main objective of the patient education is to assist the patient in identifying and preventing the triggering factors like tobacco smoke, mites, outdoor air pollution, cockroach allergen, pets, mould, respiratory syncytial virus (RSV) and help them in using their medicine appropriately. [2]

Asthma is a chronic airway inflammatory disease, often arising from allergies, characterized by bronchospasm that subsequently cause shortness of breath, wheezing and coughing. These flare ups are also called asthma attacks or exacerbations. Asthma affects children in different ways. Some children have asthma attacks only during allergy season, when they breathe in cold air, or when they exercise. [6]

Home environmental factors appear to be strongly associated with asthma in schoolchildren in a developing nation. Important associations were found between asthma and several home environmental factors as well as supplemental salt intake. This includes concerns regarding the representativeness of the study population, and the lack of objective measures such as fungal or house dust mite antigens or indoor air pollutants. [7]

This study demonstrates that poorly controlled asthma and food allergy are significant risk factors for life-threatening asthma. More intensive management of this high risk group of children might help to reduce future morbidity and mortality. Food allergy was found to be a significant risk factor for life-threatening asthma that had a convincing clinical history of reaction to food, supported by evidence of specific IgE or SPT. [8]

The domestic reservoir concentration of mite and cockroach, but not cat, allergen was closely related to the prevalence of sensitization in atopic children. However, the prevalence of current asthma had a limited relationship to these allergen measurements, suggesting that other factors play a major part in determining which allergic individuals develop asthma. [9]

The excess incidence of wheezing in smoking households appears to be largely non-atopic “wheezy bronchitis” with a relatively benign prognosis, but among children with established asthma, parental smoking is associated with more severe disease. This apparent paradox may be reconciled if environmental tobacco smoke is considered a co-factor provoking wheezing attacks, rather than a cause of the underlying asthmatic tendency. [10]

Childhood asthma was strongly associated with a family history of asthma and rhinitis, the place of residence, having smokers as parents and early weaning from maternal breast milk. The identification of risk factors is essential for the adaptation of preventive measures and the optimization of asthma patient management. [11]

Hence keeping in view of the above facts the study entitled “**To Assess the Impact of Structured Education Regarding Asthma in selected areas of Chitradurga**” will be taken to provide knowledge regarding asthma; asthma cannot be “cured,” clinical episodes can largely be prevented and controlled by the proper management.

MATERIALS AND METHODS

Study design : This was a prospective Interventional study.

Study site : The study was conducted at selected residential schools of Chitradurga city.

Study period : The study was conducted over a period of six months from 2017 to 2018.

Inclusion criteria:

Subjects of both genders.

Subjects who are willing to participate in the study

Conducted study in age group of 13-16

Exclusion criteria:

Subjects who are nonresponsive

Ethical approval:

The study was approved by the Institutional Ethical Committee of Basaweshwara

Medical College Hospital & Research Centre, Chitradurga.

Sources of data:

Demographics details of the children was obtained and documented in suitably designed children data collection form.

Other relevant data from subject by one to one interaction.

Study procedure:

The study was carried out after getting the approval from Institutional Ethics Committee. Subjects from the randomly selected schools of Chitradurga are included after taking the informed consent form, the subjects was explained the importance of the study and its benefit. Firstly, the study subject was given a questionnaire where the answers are collected and evaluated, which was the pre-test. After the pre-test, structured education was given in the form of PowerPoint presentations, patient information leaflets and other media. Post-test was carried out on the same study subjects where there will be given the same questionnaire to fill, which will be evaluated.

The questionnaire will be scoring type with multiple choice questions. Each correct answer was awarded one mark, whereas each wrong answer was given zero marks.

Statistical analysis:

After the completion of the study, the data was entered into Microsoft Excel sheets and further analysis was done by student paired "t" test in SPSS 24 version

RESULTS

Gender wise distribution of data (n=208)

Out of 208 subjects 105 (50.5%) were female and 103(49.5%) were male. The details are given in table no.1 and graphically represented in fig no.1

Table no.1 Distribution of Subjects based on Gender wise

Genders	Frequency	Percentage
Female	105	50.5
Male	103	49.5

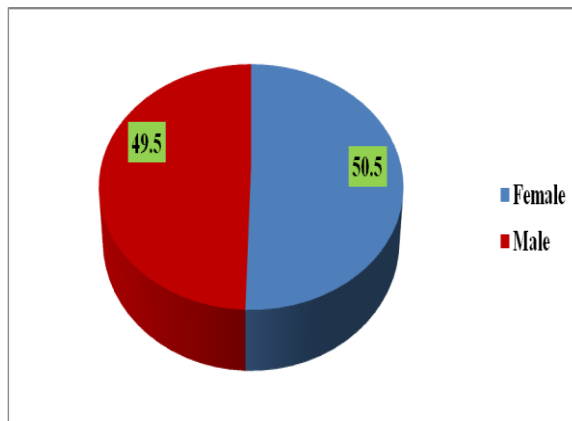


Fig no.1 Distribution of Subjects based on Gender wise

Distribution of data according to standard (n=208)

Out of 208 subject 79(38%) were studied on 9th standard and 129(62%) were of 10th std .The details are given table no.2 and graphically represented in Fig no.2

Tab no.2 Distribution of Subjects according to Standard

Standard	Frequency	Percentage
9 th std	79	38
10 th std	129	62

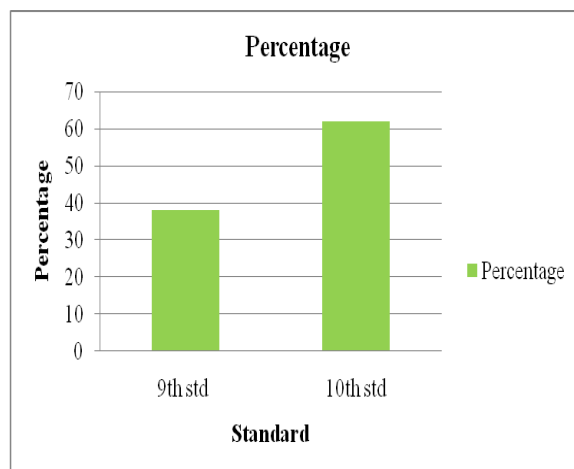


Fig no.2 Distribution of Subjects according to Standard

QUESTIONNAIRE

What is Asthma?

Out of 208 subjects in pre-test 126 were given the correct answer and in post-test 193 were given the correct answer. The details are given table no.3 and graphically represented in Fig no.3

Tab no.3 Response to question-1

Response	Pre-test	Post-test
Correct	126	193
Wrong	82	15

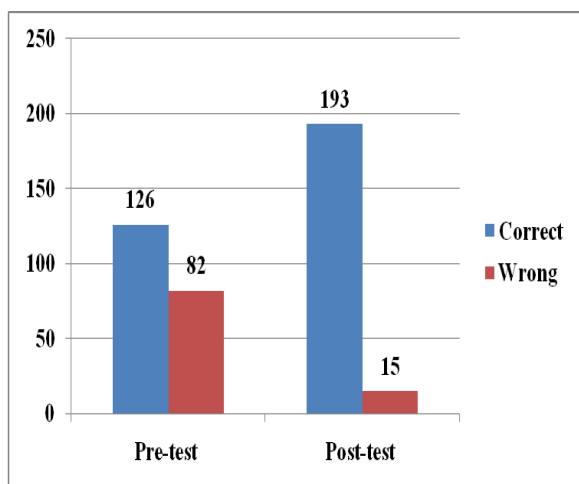


Fig no.3 Response to question-1

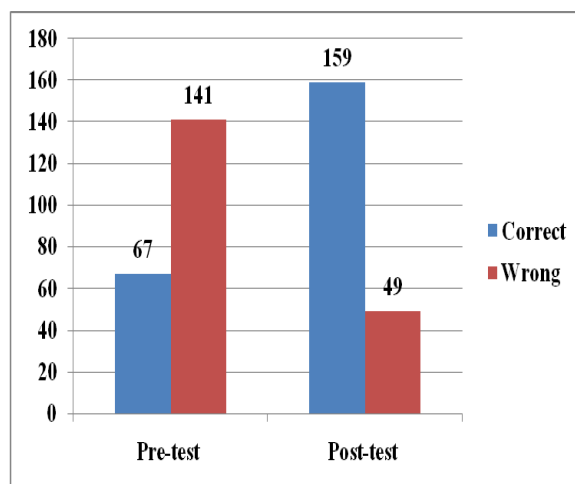


Fig no.5 Response to question-3

Which organ of the body is affected?

Out of 208 subjects 156 were know the correct answer during pre-test and after post-test it is increased into 194 subjects. The details are given table no.4 and graphically represented in Fig no.4

Tab no.4 Response to question-2

Response	Pre-test	Post-test
Correct	156	194
Wrong	52	14

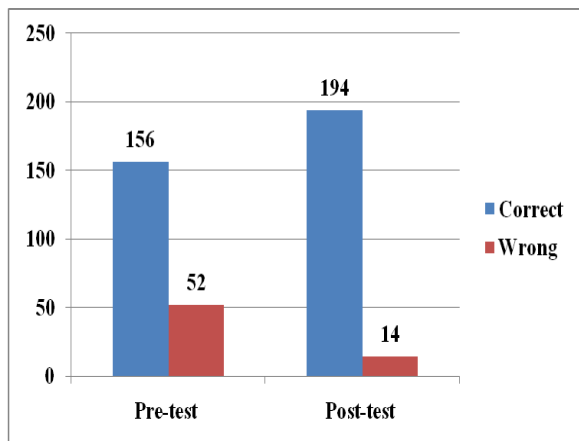


Fig no.4 Response to question-2

3. What do you mean by Metered dose inhaler?

Out of 208 subjects 67 were know about the metered dose inhaler in pre-test and 159 were know in post-test. The details are given table no.5 and graphically represented in Fig no.5

Table no.5 Response to question-3

Response	Pre-test	Post-test
Correct	67	159
Wrong	141	49

Can Asthma

Out of 208 subjects in pre-test 28 were answered as Asthma is treatable, 100 were not treatable,70 were partially treatable,10 were can be controlled and in post-test it were 10,35,5,and 158 respectively..The details are given table no.6 and graphically represented in Fig no.6

Tab no.6 Response to question-4

Response	Pre-test	Post-test
Treatable	28	10
Not Treatable	100	35
Partially treatable	70	5
Can be controlled	10	158

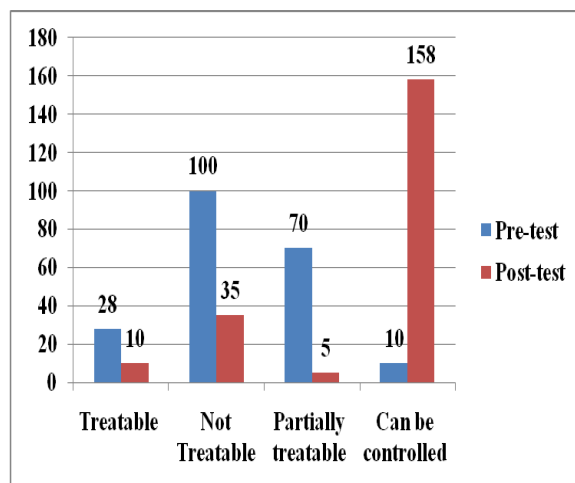


Fig no. 6 Response to question-4

COMPARISON OF MEAN SCORE OF KNOWLEDGE (paired t-test)

The scores of pre-test and post-test are analyzed by using suitable statistical parameters as mean, standard deviation, paired t test to check the significance of

result comparing with p value (<0.05) .In this study the results shown that the mean values of pre-test and post-test are 3.91 and 9.01 respectively, standard deviation values of pre-test was 1.77and post-test was 1.73,the Paired T test value was 34.14 and here the p value was <0.05 as tabulated in table no.7and graphically represented in figure no.7

Tab no.7 Comparison of mean score of Knowledge

Score	Mean	SD	t-value	P-value
Pre-test score	3.91	1.77	34.14	0.001
Post test score	9.01	1.73		

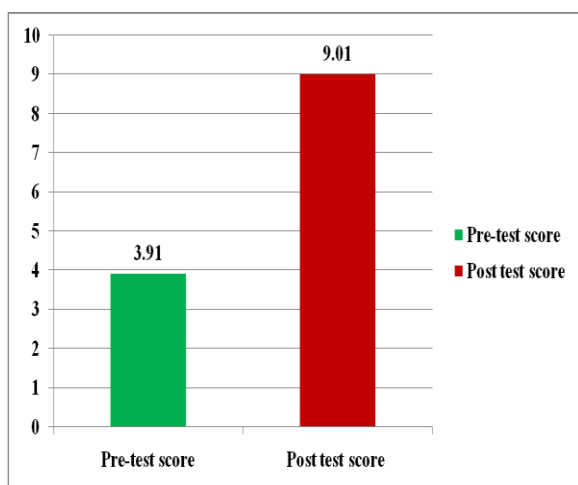


Fig no.7 Comparison of mean score of Knowledge

DISCUSSION

The present study was conducted in school children's. Out of 208 subjects 105 were females and 103 were males. The details are given in table no. (1) And graphically represented in fig no. (1) And 79(38%) were studied on 9th standard and 129(62%) were of 10th std and a similar study conducted by Behl RK in Shimla city. In the present study 1(0.5%) were of age group 13 years, 65(31.3) were of 14 years, 113(54.3%) were of 15 years and 29(13.9%) were of 16 years. Subject 79(38%) were studied on 9th standard and 129(62%) were of 10th std and a similar study conducted by Oluwole O.

In the present study 126 were know what asthma is and in post-test 193 were given the correct answer. Regarding the organ of body is affected 156 were know about it in pre-test and after post-test it is increased into 194 subjects and a similar

study conducted by Rajanandhmg and Jose J.

In the present study 53 were know the triggering factors of asthma in pre-test and 116 were know about the triggering factors in post-test. And a similar study conducted by WangY about the prevalence and risk factors for asthma and Cheraghi M conducted a Cross-sectional study to find prevalence and risk factors for childhood asthma. In the present study 70 have knowledge about the signs and symptoms in pre-test and 174 were answered correctly in post-test

In the present study 67 were know about the metered dose inhaler in pre-test and 159 were know in post-test and in pre-test 28 were answered as Asthma is treatable, 100 were not treatable,70 were partially treatable,10 were can be controlled and in post-test it were 10,35,5,and 158 respectively and a similar study conducted by Aldermen WMV regarding the Childhood asthma and treatment.

CONCLUSION

A significant number of school children had poor knowledge regarding Asthma. Patient education found to have significant influence on improvement in the knowledge, attitude and practice of asthma towards its management.

It can be concluded that the asthma is a major health problem across the world in prevalence and severity. In Chitradurga city triggering factors such as dust, animal allergen and pollution is more so there is a high risk of asthma

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REFERENCES

1. Aqeel T, Akbar N, Dhingra S, Ul-Haq N. Assessment of Knowledge and Awareness Regarding Asthma among School Teachers in urban area of Quetta, Pakistan. *Jou Pharm Pra and Com Med.* 2015; 1(1):18-23.
2. Devi KDN, Sree VHS. Study of Asthma Quality Of Life Questionnaire: An Instrument For Reviewing Asthma Health Education And Promotion. *Jou Pharm Sci Innov.* 2012;1(6):18-22.
3. Rajanandh MG, Nageswariad, Ilangok. Development and validation of knowledge, attitude, practice questionnaire for asthma and assessment of impact of patient education on asthma patients. *IntJou Pharm Sci.* 2014 6(2), 309-11.
4. Sodhi R, Prasad R, Kant S et al. A study to know the knowledge, attitude, and Practices of patients of Bronchial Asthma. *Inter Jou Med Pub Health.* 2013;3(3):159- 62.
5. Bhagavatheeswaran KS, Kasav JB et al., Asthma-related knowledge, attitudes, practices (KAP) of parents of children with bronchial asthma: A hospital-based study. *Ann Trop Med Public Health.* 2016;9(1):23-30.
6. Hawkins A, Painter L, Richter S. Managing childhood asthma in the school environment. 2011;1(2):33-39.
7. Mohamed N, Ng'ang'a L, Odhiambo J et.al., Home environment and asthma in Kenyan schoolchildren: a case-control study. *Thorax* 1995;50:74-78.
8. Roberts G, Patel N, Levi-Schaffer F, Habibi P et.al., Food allergy as a risk factor for life-threatening asthma in childhood: A case-controlled study. *J Allergy Clin Immunol* 2003;112:168-74.
9. Sporik R, Squillace S P, Ingram JM et.al., Mite, cat, and cockroach exposure, allergen sensitisation, and asthma in children: a case-control study of three schools *Thorax* 1999;5(4):675-80.
10. Strachan DP, Cook D Get.al., Parental smoking and childhood asthma longitudinal and case-control studies. *Thorax* 1998; 53:204-12.
11. J. Penders, I. Kummeling, C. Thijs. Infant antibiotic use and wheeze and asthma risk: a systematic review and meta-analysis. *Europe respiratory journal* 2011; 38: 295-302.

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