



Original Article

Knowledge and Practice on Management of Asthma in Children among Primary School Teachers

Abstract:

Introduction: Asthma is one of the common diseases of childhood, both in developed and developing countries like India. It is a chronic lung disease that inflames and narrows the airway. Asthma prevalence varies greatly across the population and is very high in urban minority communities.

Objectives: The study was conducted to assess the knowledge and practice on management of asthma in children, to determine the association between knowledge on management of asthma in children and selected demographic variables and also to determine the association between practice on management of asthma in children and selected demographic variables.

Methods and Materials: Exploratory descriptive survey was done among 50 primary school teachers. They were selected from different schools by purposive sampling techniques. Data was collected through questionnaire method by demographic profile, knowledge questionnaire & checklist to assess practice. Content Validity and language validity was established. Reliability of the knowledge questionnaire was 0.91 and practice tool was 0.94. Descriptive and inferential statistics was used.

Results: It was found that the mean knowledge score was 48.4 (SD ±11) and the mean practice score of participants was 32.5 (SD ±13.3). It can be noted from the results that the knowledge of participants was slightly higher compared to the practice aspects. There was significant association between type of family and knowledge level ($p < 0.05$). There was association found ($P < 0.05$ level) between the age of teachers and practice level.

Conclusion: Majority of the teachers had inadequate knowledge and practice towards the management of asthma in children. The health care team must take necessary actions to improve the knowledge and practice levels of teachers regarding management of children in asthma.

Key Words: Knowledge, practice, management, asthma, primary school

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Introduction

Asthma is the most common chronic disease of childhood¹. In India, children between 5-14yrs form about 1/4th of the total population. The prevalence of asthma in school going children has been reported between 4-20% in different geographic regions. Asthma is the most common chronic disease of childhood. Its incidence is the highest in primary school children and it is the principal cause of school absenteeism and reduced participation in school activities². Increasing prevalence of childhood asthma in India and the encouragement of self management practices mean that many children experience asthma symptoms and use asthma medication whilst at school³.

Asthma is a syndrome of reversible bronchial obstruction in hyper responsive airways mediated by allergy or other trigger

factors. The prevalence of asthma has increased in developed countries over past 40-50yrs and similar trends are emerging in developing countries. The genetic predisposition to develop asthma is now well recognized and the IgE mediated response to common allergens represents the most common form of disease in childhood.⁴

Knowledge and practices about asthma held by teacher is likely to have a major impact on how well a child is able to manage at emergency situation. Child spends most of the day at school. It is therefore important that these children are given proper asthmatic management either in the form of preventive measures or in case they develop symptoms at school. Most schools do not have permanent full time nurses, thus placing the responsibility for daily asthma management of students with

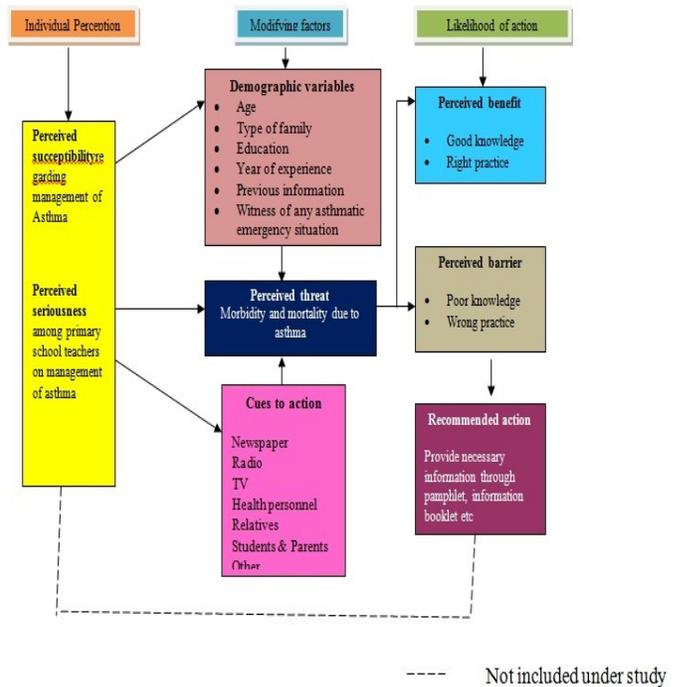
asthma by non-medical staff and teachers. The study done at Bangalore city reveals that the existing knowledge of teachers on asthma among school children is moderate but practices are very low. The enhancement of both knowledge and practice is very much required³. Proper education and knowledge of school teachers about the disease is essential, which will help in management and control of disease in school settings.⁵

Teachers spend most time in the classroom; there may be little opportunity for communication with the school doctor or nurse when they visit the school. There is clearly a need for more meetings to be facilitated between the teachers and the health professionals. Many schools do not currently have access to school health services and make a variety of medical arrangements for their pupils, including employing general practitioners and nurses. Schools teachers need to receive more information about asthma, both to enable them to cope more with their asthmatic pupils and to alleviate the anxieties of teachers. Asthma is bound to form part of every teacher's health experience with the children in their charge.³

The prevalence of childhood asthma has been increasing over the last few decades, as its related burden. In addition to the personal and social impacts of childhood asthma, increases in emergency room visits, hospitalization and missed school days, due to exacerbations in children have emphasized the need to understand the development of childhood asthma and to identify its key determinants.⁶ Hence, it is necessary to assess the level of existing knowledge and practice on management of childhood asthma. So that, it will be helpful to the healthcare members to plan for health education programmes, which may help to gaining the knowledge on issues and better handling and management of children with asthma.

Conceptual framework

Theoretical frame work for the present study is developed from Health Belief Model.



Methodology

The research design selected for this study was exploratory descriptive survey design. The study was conducted at selected primary schools, Kerala, India. In this study, the population was primary school teachers who were working in the selected schools, Palakkad. A total of 50 teachers were participated in this study. Purposive sampling technique used to select the samples for the study. The technique used for data collection was questionnaire method. Data collection instruments include demographic profile, knowledge questionnaire & checklist to assess practice. Content validity was established by giving the tool to experts. Language validity was established by translation in Malayalam and re-translation to English done by language experts. Reliability of the tool was checked after administering the tool to 10 samples. Using Split half method the item score were analysed and by Spearman's Brown Prophecy formula reliability coefficient was found out. The reliability coefficient of correlation of the knowledge questionnaire was found to be 0.97 and the reliability of the practice tool was 0.96. The data was collected, tabulated and analyzed using descriptive and inferential statistics on the basis of study objectives.

Result

Data collected for the study were analyzed by SPSS package. Fifty primary school teachers were participated in the study. Descriptive statistics of frequency and percentage were used in describing sample characters. Majority of the teachers were females (67%) and Malayalam (100%) was the native language. The average teaching experience was found to be 14.4 years. Most of the teachers know asthma either from their students who suffer or from their family. All of them read about asthma in magazines.

Fig 1: Aspect wise knowledge on management of asthma in children

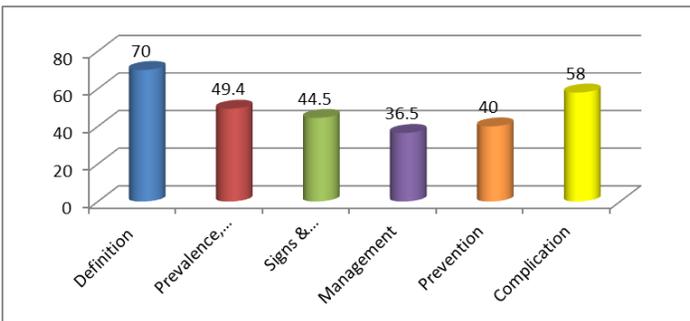


Fig 1 depicts the aspect wise knowledge on management of asthma in children.

Fig 2 : Aspect wise practice on management of asthma in children

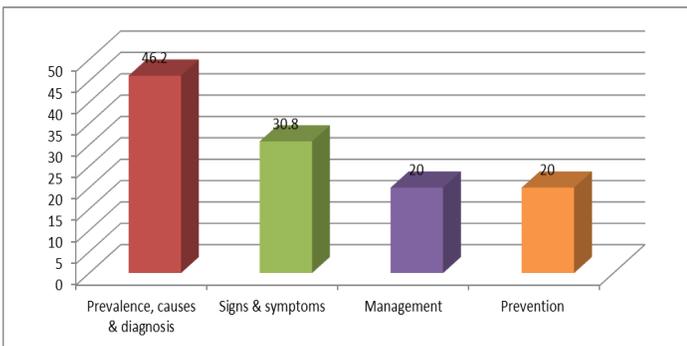


Fig 2 shows that aspect wise practice on management of asthma in children.

Table 1: overall mean knowledge and practice scores of respondents on management on asthma n=50

| Aspects | Max. score | Mean score | Respondents scores | | Paired t value |
|-----------|------------|------------|--------------------|------|------------------|
| | | | Mean | SD | |
| Knowledge | 22 | 10.64 | 48.4 | 11 | 6.5 (P <0.05) |
| Practice | 30 | 9.74 | 32.5 | 13.3 | |

Table 1 illustrates that the overall mean knowledge score of participants on management of asthma in children was 48.4 (SD ±11) and the overall mean practice score of participants on management of asthma in children was 32.5 (SD ±13.3).

Table 2: Association between type of family and knowledge level of participants n=50

| Type of family | Participants knowledge level | | | X ² |
|----------------|------------------------------|----------|--------------|----------------|
| | Inadequate | Moderate | Total Number | |
| Nuclear | 36 | 9 | 45 | 3.95* |
| Joint | 2 | 3 | 5 | |
| Com-bined | 38 | 12 | 50 | |

*significant at 5% level (df 1)

Chi-square test was used to find the association between knowledge and practice with selected demographic variables. Table 2 depicts the association between the type of family and knowledge level on management of childhood asthma. The obtained X2value is greater than the table value, at 0.05 level, so it is concluded that there is significant association between the type of family and knowledge level on management on childhood asthma..

Table 3: association between age and practice level of participants n=50

| Age group (years) | Participants knowledge level | | | X ² |
|-------------------|------------------------------|----------|--------------|----------------|
| | Inadequate | Moderate | Total Number | |
| 26-35 | 15 | 0 | 15 | 6.50* |
| 36-45 | 19 | 6 | 24 | |
| 46-55 | 6 | 4 | 10 | |
| Com-bined | 40 | 10 | 50 | |

*significant at 5% level (df 2)

Table 3 depicts the association between the age of teachers and practice level. It is showed that there is significant difference in the practice level as the age advances.

Discussion

Teacher’s response to definition, causes and complications was relatively satisfactory. was high number of incorrect responses regarding management and prevention on asthma in children. There was relatively high number of ‘don’t know’ under the area concerning management of asthma in children. Knowledge on management is considered as important because teachers may

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need to supervise the administration of inhalers, consider whether the child should take part in school games or may have to send to health care facility. Since there are no medical personnel in school, this may include initial management of any medical emergencies which take place at school. Similar findings have been reported by others.^{7,8,9}

Conclusion

Results revealed that primary school teachers are having comparatively less knowledge and practices about the management and prevention of asthma. Training programmes can enhance the knowledge and practices on asthma. Furthermore, leaflets and brochures can play a vital role to improve the level of understanding. It is very important to note that teachers should be able to find out the emergency situation and to perform the management effectively.

Recommendation

It is recommended that a similar study can be conducted on a large scale which may yield more reliable results. An experimental study can be conducted with control group using a large sample and on a sample with different demographic variables. Experimental study can be conducted by using planned teaching programme or self instructional module.

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Ethical clearance

Administrative permission was taken from the school authorities and written consent was taken from each participant before data collection.