

STUDY ABOUT PARENTAL PERCEPTIONS AND PRACTICES TOWARDS CHILDHOOD ASTHMA-CROSS SECTIONAL DESCRIPTIVE STUDY.

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ABSTRACT

Background—Asthmatic Children are dependent on their parents or caregiver, for acute care, as well as preventive care appointments. This study aims to assess parent's perceptions and practices about childhood asthma.

Methods - Parents of 100 Asthmatic children were assessed by 5 points department in the Department of pulmonary medicine, sree mookambika institute of medical sciences.

Results - Out of 100 parents, 54 went to primary school, 32 went to high school, and 14 were having a graduation level of education. KAP score was better in fathers as compared to mothers with a statistically significant and were highest among parents within the age group of 30 to 40 years. The correlation between the level of education with the KAP score was statistically significant with a p-value of <0.001.

Conclusion—There was a lack of knowledge about triggering factors of asthma, proper use of inhalation therapy, and concern about addiction and adverse effects especially the ones with a lower level of education. There is an urgent need to explain to the parents their concern about their Child's disease as well as management so as to avoid undesired asthma exacerbation.

Keyword: Asthma, caregiver, KAP

Introduction

Asthma is one of the most common chronic respiratory diseases with around 300 million patients affected by asthma worldwide, and it is likely that by 2025 a further 100 million may be affected^[1,2]. Among children and under the age of 15 years it is the third leading cause of hospitalization and one of the leading causes of absenteeism from school^[3]. Regarding their health, children are dependent on their parents or caregiver, who determines to bring the child for acute care, as well as preventive care appointments.

The severity of asthma among children can be controlled by properly managing the disease by the family^[4]. Several factors such as parents' knowledge and attitude toward asthma, level of education, income, access to health care, and medications can affect the management of disease by the family.

As health beliefs, both positive or negative, are known to influence personal health care decisions^[5-7], it is important to understand how parents' beliefs about asthma medications

influence their adherence to their child's prescribed therapy. The study aimed to determine the knowledge, attitude, and practice of parents/guardians of patients with childhood asthma about the disease and inhalation therapy use.

Methods and materials

A cross-sectional, descriptive study conducted at the Dept. of Pulmonary Medicine at a tertiary care hospital, sree mookambika institute of medical sciences ,kulasekaram,tamilnadu.A total of 100 subjects, either of the parents or guardians of children diagnosed with asthma were taken in this study. Children taken in the study were upto 15 years of age. Parents were included in the study after taking written consent, explaining about purpose of the study. Their relation with the patient and socio-demographic characteristics were noted including the level of education and geographical background. The questionnaire used for the study was the translated version of the asthma knowledge for parents of children with asthma, containing 17 questions developed by Rodriguez-Martinez^[8]. 4 questions from another asthma knowledge questionnaire were added^[9].

The questionnaire was administered to parents/family members of asthmatic children attending the OPD.A Likert-type scale of 5 points was used to respond to each of the 21 questions. The items were graded '1', '2', '3', '4', and '5' for 'strongly disagree,' 'disagree,' 'neither agree nor disagree,' 'agree,' and 'strongly agree,' respectively. Negative items were reverse coded by subtracting the values of the response from 5. Missing answers to the asthma knowledge questionnaire scored a '3'. The total score was calculated by the sum of score item responses, ranging from 21 to 105, with higher scores indicating greater asthma knowledge..

Results

Out of the 100 children, 58 weremales, 42 were females, and the mean age was 7 years. 68 were from urban backgrounds and 32 were from the rural locality. Of the total family members interviewed, 62 were mothers, 30 were fathers, and eight were other guardians. The mean age of the guardian was 30 years. Out of 100 parents, 54went to primary school, 32 went to high school, and 14 were havinga graduation level of education. Table no. 1 describes the correlation of the KAP scores studied with the various parameters. KAP score was highest among parents within the age group of 30 to 40 years.

It was found that the KAP score was better in fathers as compared to mothers and other guardians with a statistically significant. However, the correlation was not statistically significant. It was also found that the parents of urban backgrounds had more KAP scores as compared to the ones with rural backgrounds. The parents with education up to graduation had the highest KAP score(82.07) as compared to the ones with high school (66.59) and primary school level education (54.33).

The correlation between the level of education with the KAP score was statistically significant with a p-value of <0.001. Table 2 describes the analysis of the KAP questions. Response of each question was taken in Likert score from one to five. Each Response was given by participants described in percentage.

Table 1: Mean Asthma knowledge score

| Variable | Mean KAP score (s.d) | P value |
|------------------------------------|----------------------|---------|
| Relation with Patient | | |
| Mother | 60.27 (10.57) | 0.011 |
| Father | 66.83 (9.40) | |
| Others | 59.00 (9.46) | |
| Age of Guardian | | |
| 20-30 | 61.40 (11.40) | 0.370 |
| 30-40 | 64.50 (8.30) | |
| 40-50 | 54.00 (0.0) | |
| 50-60 | 60.67 (10.58) | |
| Location | | |
| Urban | 63.28 (11.23) | 0.113 |
| Rural | 59.72 (8.24) | |
| Education level of Guardian | | |
| Primary | 54.33 (4.17) | <0.001 |
| High | 66.59 (2.17) | |
| Graduation | 82.07 (4.62) | |

Table 2: Asthma knowledge questionnaire

| Questions | Disagree Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|-----------|----------------------------|------------|----------------------------|------------|----------------|
| | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) |
| | | | | | |

| | | | | | |
|--|---------|---------|---------|---------|---------|
| 1 Inhaler use can lead to dependence or addiction. | 1 (1) | 48 (48) | 12 (12) | 37 (37) | 2 (2) |
| 2 Inhalers can have an effect on the heart or damage it. | 23 (23) | 25 (25) | 12 (12) | 40 (40) | |
| 3 It's not good for children to use the inhaler for too long | 1 (1) | 45 (45) | 19 (19) | 32 (32) | 3 (3) |
| 4 After a child's asthma attack, once the coughing is over, use of the inhaler and medications should stop | 9 (9) | 40 (40) | 29 (29) | 22 (22) | 0 (0) |
| 5 Children with asthma should use asthma medications only when they have symptoms (coughing, congestion, or wheezing). | 0 (0) | 37 (37) | 24 (24) | 32 (32) | 7 (7) |
| 6 It's better to use inhalers directly, without a holding chamber, so the medication can go more directly to the lungs | 7 (7) | 41 (41) | 8 (8) | 44 (44) | 0 (0) |
| 7 The main cause of asthma is airway inflammation | 0 (0) | 13 (13) | 6 (6) | 74 (74) | 7 (7) |
| 8 Parents should ask a doctor to tell the school that an asthmatic child shouldn't exercise or participate in physical education classes. | 0 (0) | 44 (44) | 35 (35) | 21 (21) | 0 (0) |
| 9 Children who have asthma shouldn't participate in sports that make them run too much | 7 (7) | 62 (62) | 11 (11) | 13 (13) | 7 (7) |
| 10 When a child has an asthma attack it's best to go to the emergency room even if symptoms are mild | 0 (0) | 44 (44) | 13 (13) | 30 (30) | 13 (13) |
| 11 Asthma attacks can be prevented if medications are taken even when there are no symptoms—between attacks | 0 (0) | 51 (51) | 9 (9) | 40 (40) | 0 (0) |
| 12 Flu infections are the main causes or triggers of asthma attacks | 0 (0) | 71 (71) | 7 (7) | 22 (22) | 0 (0) |
| 13 It's best not to smoke or let anyone else smoke near a child who has asthma. | 0 (0) | 6 (6) | 27 (27) | 67 (67) | 0 (0) |
| 14 If the parents of a child with asthma smoke outside the house, it won't affect the child. | 0 (0) | 10 (10) | 23 (23) | 42 (42) | 25 (25) |
| 15 If an asthmatic child gets the flu, you should apply the inhalers even if there's no coughing or wheezing | 0 (0) | 9 (9) | 28 (28) | 62 (62) | 1 (1) |
| 16 Asthmatic children might have attacks that are severe enough to require hospitalization in an intensive care unit or they might even die from an attack | 0 (0) | 34 (34) | 5 (5) | 60 (60) | 1 (1) |

| | | | | | |
|--|-------|---------|---------|---------|---------|
| 17 Some medications for asthma don't work unless they're administered every day. | 0 (0) | 27 (27) | 66 (66) | 7 (7) | 0 (0) |
| 18 With preventer medications, it does not matter if some doses are missed or if you go on and off them | 0 (0) | 12 (12) | 15 (15) | 33 (33) | 40 (40) |
| 19 You should use 'preventer medication' when you have an asthma attack | 0 (0) | 5 (5) | 28 (28) | 27 (27) | 40 (40) |
| 20 Parents should give 'reliever medication' to a child as soon as they recognize the first sign of asthma | 0 (0) | 10 (10) | 74 (74) | 16 (16) | 0 (0) |
| 21 Blue puffer (salbutamol), Brown puffer (Fluticasone), and Green puffer (salmeterol) are called 'preventer medications,' so they should be used every day although you are well. | 0 (0) | 7 (7) | 74 (74) | 18 (18) | 1 (1) |

Discussion

Health education is fundamental for the proper management of asthma. Childhood asthma exacerbations can be prevented with broader knowledge about the disease, identify the symptoms and triggering factors, and the actions necessary between exacerbations [10]. Through this study, we tried to find out gaps in the knowledge of parents of asthmatic children. Asthma is more common in a male child, as after puberty hormonal changes occur in females, results in more prevalent in them after puberty^[11]. We also found out that majority of the patients were males (58/100) with a mean age of 7 years. This finding is similar to a study conducted by Al-Binali et al. in which most of the asthmatic children were of age ranging from 3 to 11 years with a mean age of 6.3. ^[12]In the majority of the patients, as expected, the mothers tend to be the first person in charge of caring for the child ^[13]. Majority of participants in our study were also mothers with a mean age of 27 years. In the present study, the Mean Asthma knowledge score was 64 (60%). Similar findings were reported in another study conducted in Riyadh, Saudi Arabia, where caregivers' asthma knowledge score ranged from 40 to 75. with the mean value of 53^[14] Whereas two other similar studies had found a higher mean score and reason behind this could be the parents give medications regularly, using the same questionnaire developed by Rodriguez-Martinez^[8,15]. It has been seen that there is a lack of knowledge about the asthma disease and its triggering factors among the parents.^[16,17]

More than half of participants had disagreed when they were asked whether asthma attacks can be prevented if medications are taken even when there are no symptoms between attacks. Myths and misconceptions among the parents related to inhaler use can directly or indirectly affect the children's asthma control. More than two-thirds of the participants in our study had poor knowledge about medication use, which was comparable to other similar studies.^[15] About forty-four percent of the participants had agreed to the misconceptions that "It's better to use inhalers directly, without a holding chamber so that the medication can go more directly to the lungs" Studies have found that parents have good knowledge about asthma symptoms but they were unable to identify the triggering factors like flu infection, smoke, any particular food allergy, or psychological stress.^[12,18] However in our

study we found that sixty-seven percent of participants knew that smoking could cause asthma exacerbation. In the present study, thirty-nine percent of the parents believed that long-term inhaler use can lead to dependency and were not in favour of continuing it for long. A similar finding was observed in a multicentre study among caregivers in China where 67.3% of parents were anxious about corticosteroid's adverse effects and 40.56% of parents were concerned about drug dependency. [19] Also, one of the studies conducted in the USA found that 38.2% of caregivers were concerned about the daily use of asthma medication, and 48.9% were bothered about the side effects of asthma medication. [20] KAP score difference in urban and rural parents was 63 and 59 respectively. Showing not much difference in knowledge among urban and rural parents. A similar finding was noticed by lai et al. in their study on a north Indian study [21]. Education is strongly linked to health and is a well-known determinant of the community's health behaviour and preventive services usage [22]. In our study, we found that level of education was found to have a statically significant correlation with knowledge score in our study; the same finding was seen in other studies. [15,19,23]

Conclusion

Our results indicate that there was a lack of knowledge about triggering factors of asthma, proper use of inhalation therapy, and a significant number of parents were concerned about addiction and adverse effects especially the ones with a lower level of education. Henceforth, in a developing nation like India, there is an urgent need to explain to the parents their concern about their Child's disease as well as management so as to avoid undesired asthma exacerbation.

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CONFLICTS OF INTEREST:

There are no conflicts of interest

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