

Prevalence of Allergic Conditions in DMIS Students in Grades 6-10 (Average Age 10-15)

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Abstract

Original Research Article

Allergy is one of the common Noncommunicable diseases (NCD). The solution to the problem lies in identification and proper medical advice. Preventing an exposure to allergen is better than suffering from the allergic consequences. This study was aimed to create medical awareness and educate parents and children regarding allergic conditions using a simple questionnaire. The results were tabulated and analyzed. Children who have allergic conditions can be advised to contact their physician before the start of academic year and inform the school nurse earlier. This will help in emergency situations with access to the right care at the right time.

Keywords: Biomedical and Health sciences; Immunology; Allergy; School kids; Prevention.

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INTRODUCTION

Allergy is one of the common NonCommunicable diseases (NCD). The underlying risk factors for the epidemic allergic disorders in Asia-Pacific are attributed to the increasing urbanization, environmental factors of air-pollution and climate changes, and westernized and sedentary life styles in recent decades than the other part of the world [1]. The solution to the problem lies in identification and proper medical advice. Some allergies are life threatening and some are very mild. In United States, 8.4% of children under age 18 have allergic rhinitis (hay fever), 10% have respiratory allergies, 5.4% have food allergies and 6% have skin allergies (hives or eczema) [2]. Preventing an exposure to allergen is better than to suffer the consequences.

AIM

The aim of this study was to create medical awareness and educate parents and children regarding allergic conditions using a simple questionnaire.

METHODOLOGY

Why the topic of Allergy?

It is a known fact that allergic condition and the medications used to manage them decreases the quality of life. This has encouraged me to educate and encourage children to overcome their allergic problems. Therefore, I intent to conduct this survey as a means of medical education and awareness to the parents and children.

Sample size: All students studying in DMIS from Grade 6 to 10 were selected for the study

Age group

The approximate age group of the students were between 10 and 15 years. This age group was selected for the following reasons.

1. The child will be able to understand and answer the question.
2. Allergies that occur at an early age are believed to disappear by itself, but allergies that occur at later age are known to be there for forever.

Survey questions

The survey questions were carefully selected with the following criteria.

1. Children should be able to understand questions without any difficulty
2. The questions were aimed at creating awareness and educate.
3. Even children who are not suffering with allergy will become aware to the common causes and symptoms. This can motivate them to educate their family and friends to seek medical help in case if they come across such conditions in their neighborhood.

Participation in the study

Children were given the forms and were not forced to fill it. They were not monitored if they filled the form or not. End of the hour, the forms were collected.

Thus, the survey did not involve forceful participation. This can be confirmed as 2 papers were returned back with comments of not willing to fill the survey. These samples were excluded from the survey.

Procedure for collection of data

The survey papers were distributed to all children in their class room during the month of May 2023. Children were asked to make “tick mark” in whichever areas are appropriate for them. Children were not allowed to write their name or any form of identity. The survey was Anonymous. Filled forms were collected

by our counselor and the data was analyzed. Total of 458 forms were collected.

The time line for the whole process can be summarized as follows:

1. Idea of educating children on allergy (Sep 2022)
2. Discussed the idea with Principal, counselor and PRO (April 2023)
3. Prepared survey form with the help of Academic Coordinator, counselor (April 2023)
4. Collection of Data (May 2023)
5. Analysis of Data (July 2023)

RESULTS

A total of 460 forms were collected. 2 were excluded for not willing for participation. A sample size of 458 was achieved.

Of the 458 children, 339 were free of any allergic conditions, 119 were suffering with allergic condition. Of the 119 children, 17 children are under medical supervision, 35 children are taking some form of medication.

Indoor allergens form the main source of allergy. Sneezing, coughing and running nose was the most common symptom noted among the 119 children. The results are arranged as chart and attached as Figures 1-6.

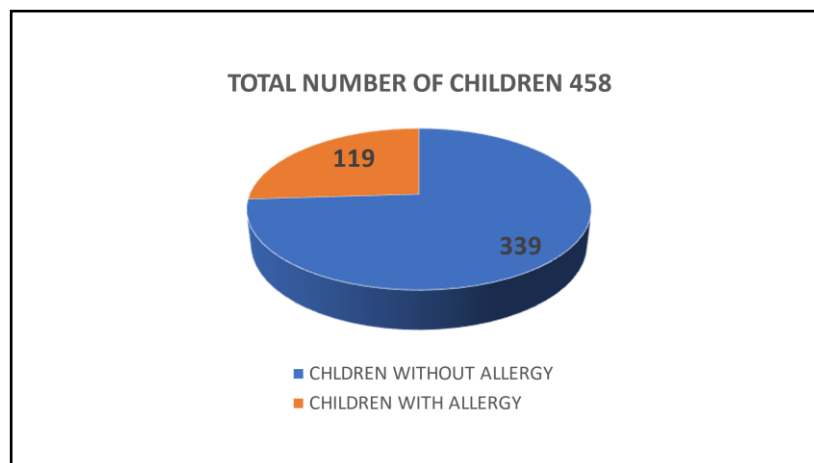


Figure 1: Number of children with and without allergy

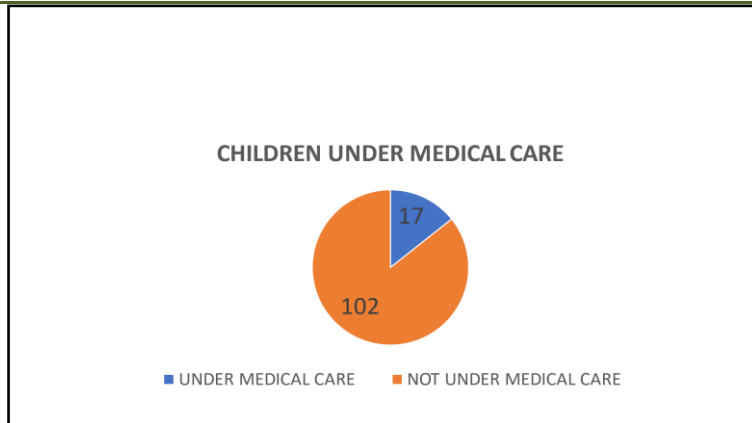


Figure 2: Children under medica care

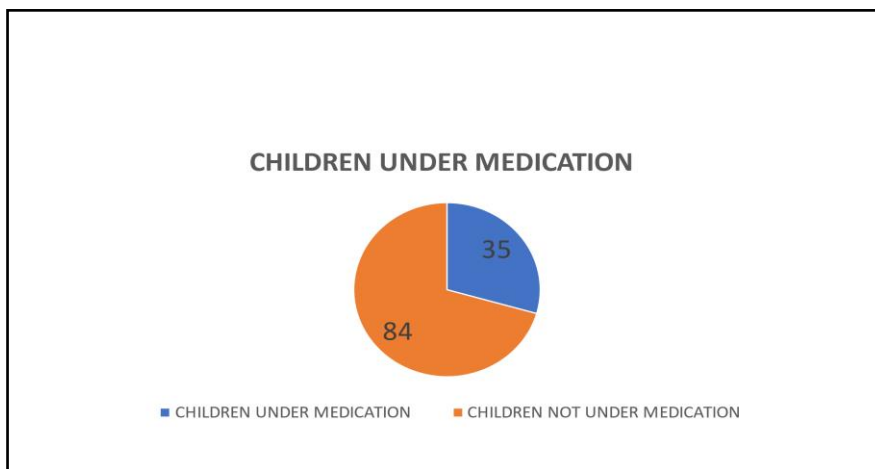


Figure 3: Children under medication

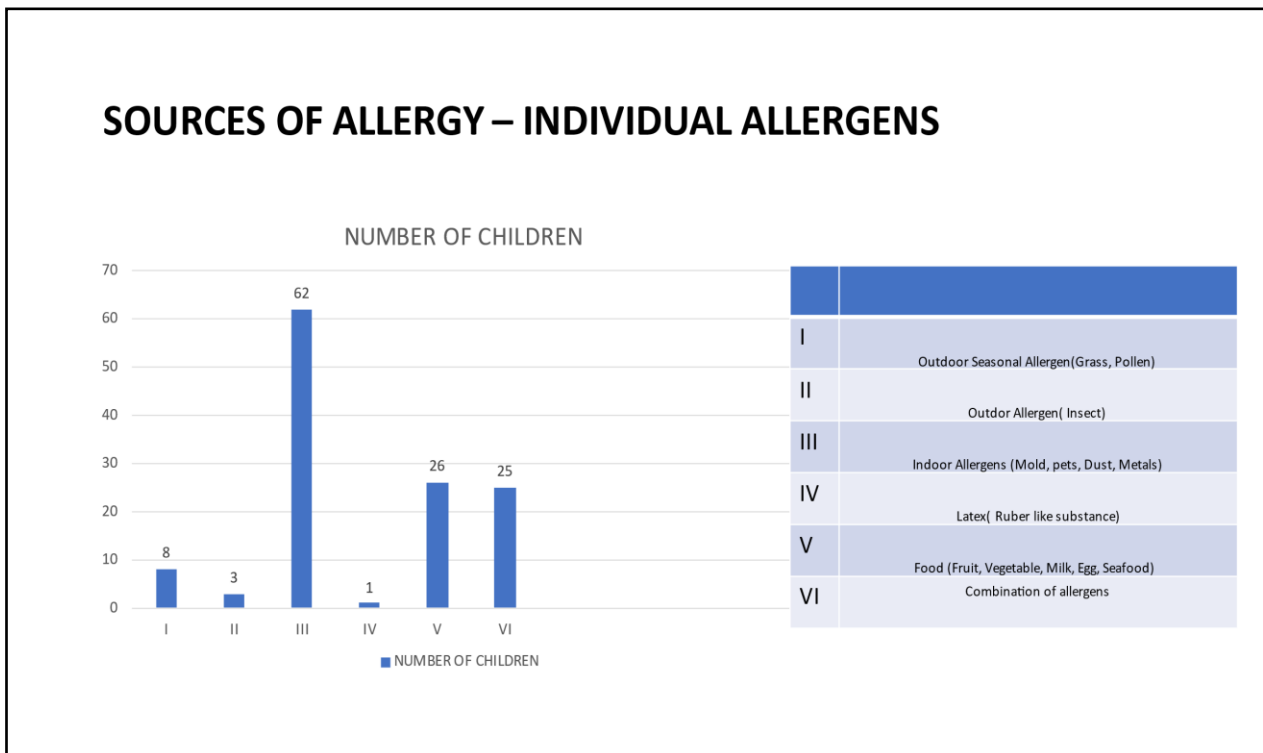


Figure 4: Sources of allergy

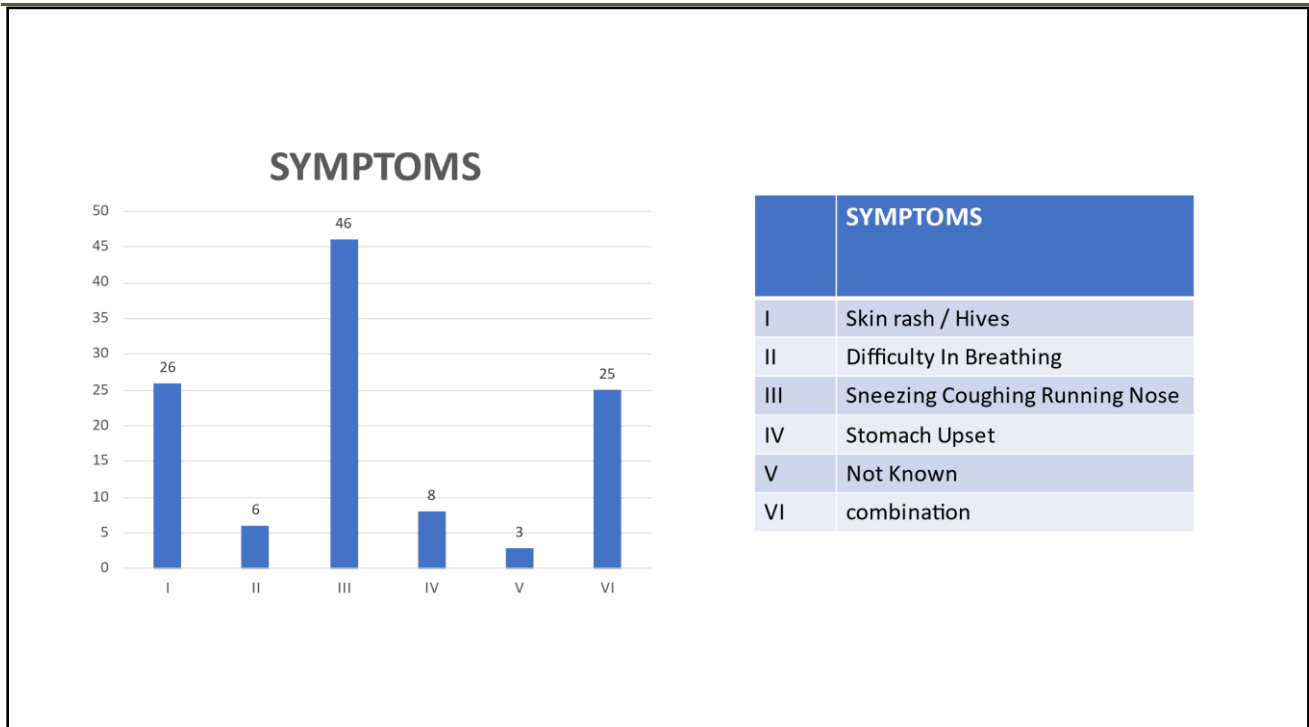


Figure 5: Common symptoms of allergy

DISCUSSION

No parent wants to see their child suffer. Medications used to treat them can also cause blurred vision, reduced coordination, dry mouth, reduced reaction speed and judgement and sleepiness. Early identification of childhood allergies will improve child’s quality of life, reduce the number of missed school days and more importantly avoid serious anaphylactic emergencies. Proper identification and management are important to improve the Quality of life. This has encouraged us to educate and encourage other children to overcome their allergic problems.

The main objective of this study was to create awareness about allergy and educate children. This is considered important as many allergies are easily managed when identified.

Children who have allergic conditions can be advised to contact their physician before the start of academic year and inform the school nurse earlier. This will help in emergency situations with access to the right care at the right time.

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2. <https://allergyexperts.com/allergy-facts>

APPENDIX 1

Prevalence of allergy conditions

1. Do you suffer from any allergy condition?
 - Yes
 - No
2. If yes, are you allergic to any of the following?
 - Outdoor seasonal allergens (grass, pollen)
 - Outdoor allergen (insect)
 - Indoor allergens (mold, pets, dust, metals)
 - Latex (rubber-like substances)
 - Food allergens (like fruit, vegetable, milk , egg, seafood)
 - Other (please specify).....
3. Are you taking any medications for the allergic condition?
 - Yes
 - No
4. Are you under the care of an allergy specialist?
 - Yes
 - No
5. Which allergic symptom does you display?
 - Skin rashes or hives
 - Difficulty breathing
 - Sneezing, coughing, running nose
 - Stomach upset