

Effectiveness of Teaching Program on Allergens among the Adolescents in a Selected Urban Area, Puducherry

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ABSTRACT

Background: Childhood allergy is an abnormal sensitivity or reaction of the immune system to a substance (allergen) that we eat, inhale, or touch. Allergens can affect anyone regardless of age, gender, race, or socioeconomic status.

Objectives: To assess existing knowledge on allergens among adolescents, to determine effectiveness of teaching program about allergens among the adolescents, and to associate the post knowledge with selected sociodemographic variables of adolescents.

Methodology: A quasi-experimental research design (one group pre- and post-test design) was adopted for the study. The population of the present study was 400 adolescents studying 9th and 10th standard in Seventh Day Adventist Higher Secondary School, Puducherry. A hundred samples were chosen using the lottery method. Then, the sociodemographic variables of adolescents and a tool that consists of 25 items of dichotomous tool to assess the knowledge on allergens' data were collected.

Results: Out of 100 adolescents, 10 (10%) had inadequate knowledge, 12 (12%) adolescents had moderately adequate knowledge, and five 78 (78%) had adequate knowledge regarding allergens after the teaching program in the post-test.

Conclusion: There was significant association between the occupation of the father and the post-test knowledge at $p > 0.05$ level, and there was no significant association between sociodemographic variables and post-test knowledge level of the adolescents on allergens.

Keywords: Allergens, Adolescents, Effectiveness, Teaching program.

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INTRODUCTION

Allergy is a major health problem that affects all age groups. Advancement in science and technology causes major allergies from chemicals and pollution. Adolescents are prone to get allergy due to lifestyle modifications and exposure. Adolescence is a fascinating transitional period, during that time, there is rapid physical, intellectual, emotional, and social growth. The strength of the nation depends on healthy adolescents, but unfortunately, some of the adolescents become the victims of allergic problems such as dust allergy, animal allergy, and food allergy. The aim of the study is to assess the effectiveness of a teaching program on allergens among adolescents in a selected urban area.^{1,2}

NEED FOR THE STUDY

Recently, an increasing number of children with allergic reactions after playing with pets, eating allergic foods, etc., have been reported in many studies. The investigator noticed that the adolescents in urban areas have inadequate knowledge regarding prevention of allergens. Hence, the investigator was interested to assess the knowledge of the adolescent on allergens in a selected urban area of Puducherry and help them to prevent allergens by a teaching program. There is concern that the investigator must continue to teach the adolescents the allergens regarding meaning, causes, risk factors, mode of transmission, types, pathophysiology, clinical manifestations, diagnostic evaluation, treatment, prevention, and complication, which provides an opportunity for the adolescents to grow and develop a healthy life.³

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STATEMENT OF THE PROBLEM

A study to assess the effectiveness of teaching program on allergens among adolescents in a selected urban area, Puducherry.

OBJECTIVES

- To assess existing knowledge on allergens among adolescents.
- To determine effectiveness of teaching program about allergens among the adolescents.
- To associate the post knowledge with selected sociodemographic variables of adolescents.⁴

HYPOTHESIS

There is a significant difference in the knowledge of adolescents on allergens before and after the teaching program.

Table 1: Frequency and distribution of level of knowledge about allergens among adolescents in pre-test

Pre-test knowledge	Inadequate knowledge (<50%)		Moderate adequate knowledge (51–75%)		Adequate knowledge (>75%)	
	No.	%	No.	%	No.	%
Overall knowledge	62	62	33	33	5	5

Table 2: Frequency and distribution of level of knowledge on allergens among the adolescent in post-test

Post-test knowledge	Inadequate knowledge (<50%)		Moderate adequate knowledge (51–75%)		Adequate knowledge (> 75%)	
	No.	%	No.	%	No.	%
Overall knowledge	10	10	12	12	78	78

Table 3: Comparison of pre- and post-test knowledge on allergens among adolescents

Knowledge aspect	Pre-test		Post-test		Paired t-test	Level of significance
	Mean	SD	Mean	SD		
Overall knowledge	47.56	12.609	80.20	14.218	19.411	<0.001 (S)

$p < 0.001$ highly statistically significant

METHODOLOGY

A quasi-experimental research design (one group pre- and post-test design) was adopted for this study. Institutional human ethical clearance was obtained. After obtaining the permission from principal Seventh Day Adventist Higher Secondary School, the study was conducted from 28.07.2008 to 14.09.2008. The adolescents who satisfied the inclusion criteria during the data collection were selected using a simple random sampling technique. The population of the present study was 400 adolescents studying 9th and 10th standard in Seventh Day Adventist Higher Secondary School, Puducherry. A hundred samples were chosen using lottery method. A pilot study was conducted to assess the reliability of the tool. Sociodemographic variables of adolescents through the interview method. A pretest was conducted for 10–15 minutes using the structured interview schedule to assess the knowledge regarding allergens. On the same day, the teaching program was imparted. The duration of the teaching program was about 45 minutes, and 10 minutes were allowed to clear the doubts. A post-test was conducted using the same tool after 7 days. The statistical method used for data analysis is descriptive (mean and standard deviation to assess the existing knowledge on allergens) and inferential statistics (paired “t” test) to determine the effectiveness of teaching program regarding allergens among the adolescents in post-test, (Chi-square test) to find out the association between post knowledge and selected sociodemographic variables of the adolescents on allergens.⁵⁻⁷

INCLUSION CRITERIA

- Adolescents who were studying in IX and X standard.
- Adolescents who were able to understand English or Tamil.
- The adolescents in the age range of 14–15 years.
- The adolescents who were willing to participate in this study.

EXCLUSION CRITERIA

- Adolescents who were absent during data collection day.
- Adolescents who were physically sick during data collection day.

RESULTS AND DISCUSSION

Table 1 reveals that out of 100 adolescents, 62 (62%) had inadequate knowledge, 33 (33%) had moderately adequate knowledge, and 5 (5%) had adequate knowledge in the pre-test.

Table 1 shows the distribution of the level of knowledge on allergens among the adolescents in post-test. The data revealed that most of the adolescents had adequate knowledge, which means 78 (78%) of adolescents had adequate knowledge and 12 (12%) of adolescents had moderately adequate knowledge regarding the allergens, and 10 (10%) had inadequate knowledge regarding allergens.

Table 2 reveals that the paired “t” test value was 19.411 at $p < 0.001$, showing that there was a significant improvement in knowledge level after teaching program on allergens among the adolescents.

It was found that there was a statistically significant association between the occupation of the father of the adolescents and their post-test knowledge regarding allergens. Table 3 shows the association between the post-test knowledge levels on allergens among adolescents with the selected sociodemographic variables. The Chi-square test revealed a statistically significant association between occupation of the father and the post-test knowledge at $p < 0.05$ level.

There were no significant associations between the sociodemographic variables such as age, gender, class studying, religion, type of family, family income, occupation of mother, and details of the siblings. Thus, knowledge of the adolescents regarding allergens was increased after the teaching program. On the whole, the study accepts the hypothesis that was formulated at the beginning of the study.

RECOMMENDATIONS

- A manual can be prepared and given to all healthcare team members.
- Educational programs on allergens can be conducted for all people.
- To create more awareness on knowledge regarding allergens through mass media.

CONCLUSION

The study concludes that there was a significant association between the occupation of the father and the post-test knowledge at $p > 0.05$ level, and there was no significant association between sociodemographic variables and the post-test knowledge level of the adolescents on allergens. Thus, knowledge of the adolescents regarding allergens was increased after the teaching program.^{8,9}

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