

# The Self-Reported Practice: On Prevention And Management Of Airborne Diseases Among Higher Secondary School Students In Selected School, Bhubaneswar.

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**Abstract:** *A non-experimental descriptive explorative study aims to assess the self-reported practice on prevention and management of airborne disease among higher secondary school students in selected schools, Bhubaneswar. The study was based on a post-test with 500 samples selected by using a simple random sampling technique. A self-structured questionnaire was used for self-reported practice with poor (0-10), average (11-20), and good (21-30) score. The self-reported practice of higher secondary school students regarding the prevention and management of airborne disease was assessed by administering questionnaires to the students. As a result 0.8% of the samples have poor practice, 38.8% of the samples have average practice and 60.1% of the samples have a good practice. All the p-values were greater than 0.05 except the education of the father (p=0.0133) which was found to have a significant association with the self-reported practice of higher secondary school students regarding the prevention and management of airborne disease. Thus it was concluded from the study that the majority of the students have good practice regarding the prevention and management of airborne disease. The study was effective because the education of the father has an association with the self-reported practice of the higher secondary school students.*

**Keywords:** Airborne diseases, Higher secondary school students

## Introduction

About 35% of consumers are children in Indian. Children are the wealth of tomorrow and need special care to survive and thrive. Children are the wealth of tomorrow. As per evidence by epidemic children are more prone to health problems than males. Respiratory problems are common in children, aberrantly the respiratory infection leads to cause of mortality and morbidity. <sup>[1, 2]</sup>

Respiratory infection constitutes 45% of outpatients, among 30% of IPD and 50% of ICU admissions are due to pneumonia. Due to air pollution 28% of death occur in India. The rate of acute respiratory infection 10.5 times more in life in a double room hut dwelling than single room among children. "Droplet nuclei" are tiny small particles (1-10 microns) dried residue of droplets spread of airborne diseases like TB, influenza, chickenpox, and measles. Children are more prone to infectious diseases than adults due to a compromised immune system and developmental and biological variances. In school settings, infectious disease may readily be transmitted from child to child because of handling common objects. <sup>[3, 4, 5]</sup> According to WHO (7<sup>th</sup> October, 2018), India confirmed H1N1 5,651 cases and 464 deaths. In 2018 marked the 100<sup>th</sup> annual of 1918 influenza known as "Spanish flu", affected about 500 million people worldwide. <sup>[6]</sup>

Pooja Arya (2019) conducted a study complication of diphtheria, Rajasthan, India. A total sample of the study all cases of diphtheria and all age groups which attended ENT OPD and

Emergency department were included. The study found 57.59% of patients were male and 42.41% of patients were female. It was found that the occurrence of diphtheria was highest in November and October and was quite frequent during September and December. No cases During April, June, and July. It was observed that the most common post diphtheria complication was myocarditis (23.42%) followed by neurological complications. To prevent the complication of the disease active immunization is customary and to detect the disease at an early stage and for prompt treatment masses should be educated regarding the dreadful nature of the disease. <sup>[7]</sup>

Preeti L Rai (2018) conducted a prospective, observational, hospital-based study in tertiary care hospital, to study the spectrum of neurological complications of diphtheria, timing of onset concerning respiratory disease, and pattern of recovery. The samples were 28 cases of bulbar symptoms diphtheria with neurological complications age group 3-18 years. Isolated palatal palsy was present in 18 children (64%). Third cranial involvement was present in 4 children. Three children and unilateral lower motor neuron facial palsy and one child had sixth cranial nerve palsy. Nine children developed symmetric limb weakness. Diaphragmatic palsy was present in three children with the onset from 1-4 weeks after pharyngeal diphtheria. The loss of vasomotor tone was present in two children. Recovery was complete in all 28 children. Pediatricians / neuro physicians should have a high index of suspicion to recognize diphtheritic polyneuropathy. <sup>[8]</sup>

## MATERIALS AND METHODS

A quantitative explorative survey research perspective is adopted to assess the self-reported practice on prevention and management of airborne diseases among higher secondary school students in selected schools, Bhubaneswar. The main setting of the study was conducted in Sai Chanakya +2 Science College, Bhubaneswar, and Institute of Higher Secondary Education, Bhubaneswar. Total 500 numbers of higher secondary school students participated in this study. The selection of participants was done by using a simple random sampling technique. Participants of the study were higher secondary school students of 11<sup>th</sup> and 12<sup>th</sup> standard from Sai Chanakya +2 Science College and Institute of Higher Secondary Education, Bhubaneswar. They were given the demographic questionnaire and assessed for their socio-demographic data.

The inclusion criteria of the participation for the study were:

- (i) Those who are studying in the 11<sup>th</sup> -12<sup>th</sup> standard in the selected higher secondary school students.
- (ii) Those can understand English
- (iii) Those are willing to participate.

Structured questionnaire used for assessing self-reported practice on prevention and management of airborne diseases among higher secondary school students.

The self-structured questionnaire was administered to the higher secondary school students to assess the self-reported practice on the prevention and management of airborne diseases. Participants were cooperative and interested in part of the study and the researcher did not face any difficulty in conducting a study among participants.

## Results

Tabular representation of demographic variables.

**Table 1:** Frequency (f) and percentage (%) wise distribution of age in years, gender, class in standard, type of family, residence, education of father, education of mother, monthly family income, no. of siblings. (N=500)

Variable	Frequency (f)	Percentage (%)
Age in years		

16-17	360	72
<b>Gender</b>		
Male	276	55.2
<b>Class in standard</b>		
11 <sup>th</sup>	313	62.6
<b>Type of family</b>		
Nuclear	275	55
<b>Residence</b>		
urban	276	55.2
<b>Education of father</b>		
Higher secondary / above	307	61.4
<b>Education of mother</b>		
Higher secondary /above	241	48.2
<b>Monthly family income</b>		
20001-30000	143	28.6
<b>No. of siblings</b>		
2	177	35.4

Analysis of data related to self-reported practice on prevention and management of airborne disease among higher secondary school students is shown through the graphical presentation.



**Figure 1:** Bar diagram showing score on level of self-reported practice by using percentage.

**Table 2:** The association between self-reported practice and demographic variables was assessed by using Chi-Square test and is tabulated below:

Demographic Variable		Chi-square value	Df	P-value	Remarks
Age in years	16-17 17-18 ≥18	7.820704	4	0.0984	NS
Gender	Male Female	3.443956	2	0.1787	NS
Class in standard	11 <sup>th</sup> 12 <sup>th</sup>	0.370818	2	0.8308	NS
Type of family	Nuclear Joint	3.224434	2	0.1994	NS
Residence	Urban Rural	3.443956	2	0.1787	NS
Father education	Illiterate Primary Secondary Higher secondary/ above	16.08899	6	0.0133	S
Mother education	Illiterate Primary Secondary Higher secondary/ above	5.956641	6	0.4281	NS
Monthly income	<10000 10001-20000 20001-30000 ≥30001	4.646017	6	0.5899	NS
No. of siblings	1 2 3 ≥4	12.36306	6	0.0543	NS

### Discussion

The research article designed to assess the self-reported practice on prevention and management of airborne diseases among higher secondary school students in selected schools, Bhubaneswar. This study involved a non-experimental research design, simple random sampling techniques. The size of the sample was 500 higher secondary school students of 11<sup>th</sup> and 12<sup>th</sup> standard according to inclusion and exclusion criteria. The setting of the study was at Sai Chanakya +2 Science College and Institute of higher secondary school students, Bhubaneswar, Odisha, India. The self-reported practice of the higher secondary school students was assessed by a self-structured questionnaire. About 60.4% of the students had a good practice, 38.8% average, and 0.8% poor practice. All the p values of variables are greater than 0.05, only education of the father was found to have a statistically significant association (0.01) with the self-reported practice of the higher secondary school students on prevention and management of airborne diseases.

Mahmoud S. Al-Haddad (2015) conducted a cross-sectional study on knowledge and practices of the general public about the common cold in Taif, KSA. Through a non-probability convenience sampling technique 1700 samples were selected. The majority had poor knowledge of the common cold, 40% believed no discrepancy among the common cold and the flu, 66% believed common cold would be treated with antibiotics, and only 24% perceived direct contact with an infected person would spread common cold by coughing. A few participants took precautionary measures to avoid contact with other people after having a common cold. The study revealed, the general public had poor knowledge of common cold impacted their routine practices towards the management of ill.

Healthcare policymakers should consider these findings in developing plans for improving people knowledge and practices. <sup>[9]</sup>

### **Conclusion**

The study concluded that the experience of conducting this study was satisfying one, as there was good cooperation with the students. It has been observed that 60.4% of the students had good practice, 38.8% average practice, and 0.8% poor practice. This indicates that a maximum of the students have very good practice. The following conclusions were made based on the findings of the study.

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**Conflicts of interest:** None

**Ethical Permission:** Approved

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