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Knowledge Level on Ill Effects of Air Pollution among Students in Selected Schools

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Abstract

This study entitled "study to assess the knowledge level on ill effects of air pollution among students in selected high schools at Salempur"submitted in the year 2024. ***Aims:*** The objectives are to assess the knowledge level on ill effects of air pollution among students in selected schools at Salempur; to determine the association between the knowledge with the socio demographic variables. ***Hypothesis:*** There is a significant association between the level of knowledge with socio demographic variables. ***Design and setting:*** Quantitative approach descriptive design was used. Total 30 students were selected from selected high schools at Salempur. ***Methods and materials:*** Convenient sampling technique was used to select 30 participants. Structured questionnaire was used to collect the data. The results of this study revealed that most of students 60% had moderate level of knowledge and 40% had adequate knowledge about air pollution and interestingly no students scored inadequate knowledge and concluded that, there is a need to motivate the students to spread awareness on air pollution and its ill effects and should change the behavior of people.

Keywords: Ill effects; Air pollution; Students.

INTRODUCTION

Worldwide, air pollution is becoming a greater threat to human health. Air pollution refers to the presence of foreign materials such as smoke, toxic gasses, dust, vapors and fine particles in the atmosphere which are dangerous for human beings, animals, vegetations, buildings, monuments etc. Air pollution has both immediate and long-term implications on health. Acute bronchitis is the situation that results from the respiratory system bearing the immediate repercussions. An acute case of air pollution could possibly cause suffocating death right away. Lung cancer, allergies, emphysema, bronchial asthma, and chronic bronchitis are the delayed effects. Since anthropogenic air pollution causes approximately 9 million deaths annually, it is one of the largest global public health threats.[1] Chronic asthma, pulmonary insufficiency, cardiovascular illnesses, and cardiovascular mortality are the long-term impacts linked to air pollution. A Swedish cohort study suggests that prolonged exposure to air pollution may cause diabetes.[2] The issue is particularly severe

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in emerging nations[3] because of overcrowding, unchecked urbanization, and the advancement of industrialization. This results in poor air quality, particularly in nations with high levels of socioeconomic inequality and low knowledge of environmentally friendly management practices. People who utilize fuels like wood or solid fuel for household requirements because they have low incomes are exposed to contaminated, poor-quality air at home. It is noteworthy that three billion people use the aforementioned energy sources every day for heating andcooking needs.[4]

India[5] has been found to have extremely high levels of air pollution, with hazardous air quality. One of the most polluted cities in India is New Delhi. As a result of air pollution, flights into and out of New Delhi International Airport are frequently cancelled. India's rapid industrialization, urbanization, and growth in the use of motorcycles for transportation are all contributing factors to pollution in both urban and rural areas. However, one of the main causes of home air pollution in Nepal and India is the burning of biomass related to cooking and heating demands and practices.[6] Household air pollution in India is connected with substantial health impacts, especially in women and young children, who stay indoors for longer times. While acute lower respiratory disease is more common in young children under the age of five[7], chronic obstructive respiratory disease (CORD) and lung cancer are primarily observed in women. In addition to helping stakeholders and the government create and execute efficient policies for the control of air pollution and to guarantee improvements in air quality, this study seeks to gather data regarding students' awareness of air pollution and its impacts.

Problem statement

A study to assess the knowledge level on ill effects of air pollution among students in selected high schools at Salempur.

OBJECTIVES OF STUDY

1. To assess the knowledge level on ill effects of air pollution among students in selected schools at Salempur.
2. To determine the association between the knowledge with the socio demographic variables.

Hypothesis

H_1: There is a significant association between the levels of knowledge with socio demographic variables.

Assumptions

Students may have adequate knowledge regarding ill effects of air pollution.

MATERIAL METHOD

Sample size

Sample size consisted of 30 students.

Sampling Technique

Non probability convenient sampling technique was adopted.

Setting

Students were selected from Islamia High school at Salempur.

Criteria for sample selection

Inclusion criteria

1. Subjects those who are in studying between 6th class to 9th class.
2. Both male and female are included.

Exclusion Criteria

1. Subjects those who are not willing to participate.
2. Subjects those who are not available on the day of data collection.

Description of tool

The instrument used in this study contains 2 sections which are described before.

Part I: It consist of demographic variables age, gender, education status, educational status of father, educational status of mother, occupational status of father, occupational status of mother, monthly income of family, type of family.

Part II: Knowledge questionnaire regarding air pollution it consist of 20 questions.

Score interpretations: Total score 20 each correct answer given the score the wrong answers scored as '0'. Level of knowledge was grouped into following categories.

Inadequate: 0-7

Moderate: 8-14

Adequate: 15-20

Content validity

In order to measure, the content was validated and finalized by experts in the field of preventive and social medicine, community health nursing. This same tool was used for the pilot study in this same setting to assess the feasibility of the study. The result of the pilot study evidenced that, there was a feasibility to conduct a main study in same setting.

Procedure for data collection:

Before data collection, proper permission was obtained from the principal of school and consent obtain from participants. The sample selected from adolescents through convenient sampling technique. Data was collected for 15–20 minutes through questionnaire about ill effects of air pollution. After data collection, Given thanks to there spondents and the authority.

RESULTS AND INTERPRETATION

Table 1: Frequency and percentage distribution of socio demographic variables of students

(n=40)

Demographic data	F	%
Age		
11 Years	9	30
12 Years	4	13.3
13 Years	10	33.3
14 Years	7	23.3
Gender		
Male	8	26.6
Female	22	73.3
Education status		
6Th	11	36.6
7Th	13	43.3
8Th	2	6.6
9Th	4	13.3
Educational status of father		
No formal education	9	30
Primary education	9	30
Secondary education	6	20
Degree & other	6	20
Educational status of mother		
No formal education	13	43.3
Primary education	7	23.3
Secondary education	4	13.3
Degree and other	6	20
Occupational status of father		
Farmer	10	33.3
Own business	10	33.3
Private job	10	33.3
Government job	-	33.3
Occupational status of mother		
Housewife	13	43.3
Own business	9	16.6
Private job	5	10
Government job	3	0
Monthly income of family		
Rs. 5000	12	40
Rs. 5001-10000	12	40
Rs. 10001-15000	2	6.6
Above rs. 15001	4	13.3
Type of family		
Nuclear family	7	23.3
Joint family	22	73.3
Extended family	1	1.3

The above table explains that, Out of 30 samples, maximum that is 33% belong to 13 years and most of them 73.3% were females. According to education status, many of them were studying 7th 43.3% and 23.3% students were belong to nuclear family, 73.3% were belong to joint family. Very few of the

parents were educated and parents were farmer, doing business or working in private sectors. Most of the students belong to joint family.

Table 2. Frequency and percentage distribution of knowledge level on ill effects of air pollution among students.

Knowledge Score	f	%
Inadequate (0 - 7)	0	0
Moderate (8 - 14)	18	60
Adequate (15 - 20)	12	40

The above table reveals that no one has inadequate knowledge, 60 % had moderate knowledge and 40% had adequate knowledge regarding air pollution.

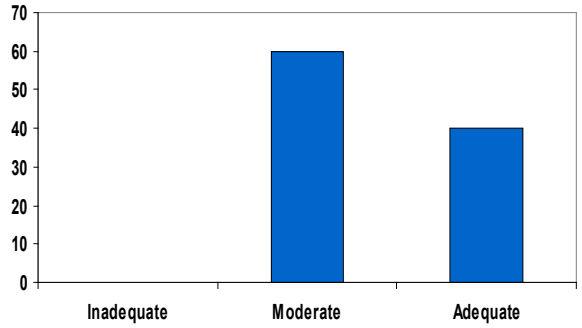

Fig. 1: Students Knowledge level on air pollution

The above chart represents the knowledge level of the children in selected high school at Salempur regarding air pollution.

DISCUSSION

The findings of this study explained that most of students have moderate and adequate knowledge regarding air pollution and its effects. It also explained that there were no significant association between level of knowledge and selected socio demographic variable of students. The calculated $\chi 2$ value for the selected Socio-demographic variables were lower than the table value at 0.05 level of significance.

Similar study was conducted in Ghana[8], that aimed to evaluate Accra, Ghana's residents' awareness, attitudes, and perceptions of air pollution. In order to collect quantitative data from 1404 respondents, the study used a cross-sectional design. SPSS version 23 was used to analyze the data. In the survey, there were more female respondents (54.1%) than male respondents (45.9%). The majority of respondents (70.5%) knew that air pollution causes haze and that it has negative health effects. Although the majority of the respondents are aware of air pollution and its impacts.

CONCLUSION

Air pollution is a major threaten on human health, triggering, and inducing many diseases leading to high morbidities and mortalities, especially in the developing countries such as India. Controlling air pollution is therefore essential and ought to be the government's top priority. All rules and regulations pertaining to air pollution must be updated by the legislators and policy makers in these nations. This study demonstrated that children have a solid understanding of air pollution and its consequences. Here, adopting a more positive attitude and reducing the amount of secondary lifestyle are crucial areas for improvement in behavior.

Limitations

Thestudyonlyassesses the level of knowledge on ill effects of air pollution among students.

Recommendations

- A study can be conducted to find out the effectiveness of intervention in improving knowledge.
- To provide more awareness on harmful effects of air pollution on health.
- Similar study can be conducted with the more samples in colleges.
- The study can be conducted as a true experimental design and as comparative study with other audio visual aids.

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