

Knowledge on Air Pollution and its Impact on Health Among Young Adults in Delhi

Anjali Kaushik¹, Naseem Mancheri²

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Abstract

The objectives of the study were to assess the knowledge regarding Air Pollution and its impact on health among young adults studying in selected colleges of Delhi. *Method:* Quantitative Research with Exploratory research design was used. Structured questionnaire was used to assess the knowledge regarding Air Pollution. Quota sampling was adopted to select 200 students from a selected University in New Delhi. *Results:* Data was analyzed using Descriptive statistics. The findings showed that 94% of the samples had inadequate knowledge on Air Pollution and its impact on Health. *Conclusion:* The present study revealed that majority of the samples were not aware about Air Pollution and its impact on health. Therefore, there is an urgent need to create awareness and sensitize people about Air Pollution.

Keywords: Air Pollution; Young Adults

Introduction

Air Pollution is not a joke, air pollution will make you choke.¹ Environmental pollution is known as the main challenge of urban life, and imposes significant health and financial losses to countries. Among environmental risk factors, air pollution is introduced as the most important one. According to a report by World Health Organization, indoor and outdoor air pollution cause 7 million deaths annually. The majority of these deaths occur in developing countries.² Acute and chronic exposures to air pollution lead to many health outcomes, such as cardiovascular, respiratory, and cerebrovascular disorders.^{3,4,5}

Air pollution originates from various sources, but mainly caused by human activities such as vehicles, industries, etc. Solid, liquid or gaseous materials released into the air from natural resources or human activities, impose damages to human, plants and animals' health, and the ecosystem balance.⁸ The most polluted cities cannot be determined based on available data. Although according to WHO's database, air pollution is high in a number of cities in China, India, Iran, etc.⁹

The most important health burden of air pollution can be seen in developing countries. Lack of knowledge about the health effects of air pollution is the biggest obstacle in defined activities and social organizations and international sources. The health sector plays a key role for leading a multi-pronged approach to prevent exposure to air pollution. It can encourage and support other sectors (transport, housing, energy and industry) in the development and application of long term policies to reduce the health risks of air pollution.¹⁰

Author Affiliation: ^{1,2}Tutor, Rufaida College of Nursing, Jamia Hamdard, New Delhi

Corresponding Author: Tutor, Rufaida College of Nursing, Jamia Hamdard, New Delhi

E-mail: anjali.kaushik79@gmail.com

Materials and Methods

In this cross sectional study, 200 students of Jamia were selected by Quota sampling. The only inclusion criterion was to be the student of Jamia Hamdard. Structured Questionnaire was used to collect data. The questionnaire consisted of two parts:

demographic information, knowledge regarding air pollution. Formal administrative approval was obtained from the concerned authority to conduct the final study.

Results

Section I			n=200
Socio-Demographic data of the Subjects.			
Demographic Variables	Frequency	Percentage	
Age (in Years)			
17-20	136	68.0	
21-23	54	27.0	
24 & above	10	5.0	
Gender			
Male	114	57	
Female	86	43	
Religion			
Hinduism	52	26.0	
Islam	145	72.5	
Christianity	02	1.0	
Buddhism	01	0.5	
Education			
Sr. Secondary	81	40.5	
Graduate	85	42.5	
Post graduate	33	16.5	
Other (Diploma)	01	0.5	
Preferred mode of transport			
Private	85	42.5	
Public	103	51.5	
Pool	10	5.0	
Other (by walk)	2	1.0	
Vehicles at home			
Bicycle	91	45.5	
Motorcycle	162	81	
Cars	129	64.5	

Section II					n=200
Subjects Knowledge score on Air Pollution.					
Knowledge Score					
Possible Range of Score	Obtained Range of Score	Mean	Median	Standard Deviation	
0 - 30	5 - 25	16.47	17	4.48	

Section III			n=200
Frequency and Percentage distribution of Subjects by their Knowledge score on Air Pollution.			
Category	Frequency	Percentage (%)	
Adequate ($\geq 75\%$)	12	6	
Inadequate ($< 75\%$)	188	94	

Information Regarding Vehicle Ownership

Only 43% of the subjects were having one motorcycle, 23% of the subjects had two motorcycles and 6.50% of the subjects had more than two motorcycles. 37% of the subjects had one car, 20.5% subjects had two cars and 6.5% had more than two cars.

Information Regarding Fuel Consumption

Majority (87%) subjects were using petrol as a fuel whereas 10.50% of the subjects were consuming diesel.

Information Regarding Frequency of Pollution Checked

40% of the subjects did pollution check once a year, 36% of the subjects did twice a year, 11.5% of the subjects never did pollution check and 12% of the subjects not using personal vehicle.

Discussion

The findings from the current study agree with those of Al Khamees and Alamari where the knowledge of indoor pollution was poor. In the present study, knowledge assessment about outdoor air pollution was done which was found to be inadequate. Also, the two studies agreed that there was a little advancement in the education on this topic within the examined population.¹¹

A study conducted by Sharma R to assess the effectiveness of structured teaching programme Regarding Knowledge on Effects of Air Pollution on Health Among High School Students in Selected High School in Bangalore revealed that the students had poor or inadequate knowledge regarding air pollution which is consistent with the findings of the present study where 94% students had inadequate knowledge about air pollution. Air pollution can directly or indirectly affect human health, causing physical discomfort and leading to disease or even death. Studies have shown that when the human body is exposed to highly polluted air for a long time, the mortality rate increases.¹² Therefore, there is a need to create awareness among people about Air pollution as the air we breathe has a lot of effect on our health. People having more number of vehicles that not only pollute air but also have serious health effects. Vehicles if not maintained properly, not checked for pollution create more pollution. Fuels like solar energy, CNG should be promoted.

Conclusion

The present study revealed that 94% of the samples had adequate knowledge on Air Pollution. The study thus implies that awareness regarding Air Pollution, its ill effects on health and how to find an alternative should be created by health workers at all levels. Air quality is becoming poor and poor day by day especially in metropolitan cities.

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