

HEALTH AWARENESS, ATTITUDES AND PREVENTIVE PRACTICES AMONG URBAN & RURAL INDIAN ADULT POPULATION ABOUT LUNG DISEASES

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ABSTRACT

This cross-sectional study was conducted across India, among the population of 18 years and above of both male and female genders. An extensive anonymous survey of a large sample of 693 people was conducted, among which 83.26% were from 18-30yrs of age group, 5.77% from 31-40yrs of age, 5.05% of 41-50yrs and 5.92% above 50yrs. Among them, 51.95% were males and 48.05% females. The co-morbidities present among the respondents were High Blood Pressure(4.19%), Diabetes Mellitus(1.88%), Heart disease(0.86%), History of Tuberculosis(1.44%), Previous stroke(0.14%), Steroid therapy(0.43%), Asthma(2.89%), Obesity(16.74%), High cholesterol(2.45%), Family history of respiratory disease(5.92%), Family history of High BP(21.5%), Family history of DM(27.56%), Family history of stroke(6.21%). Our study focussed on co-morbidities, family history, respiratory health and symptoms, exercise patterns, exposure to air pollutants, tobacco consumption and second hand smoking prevalence in adult Indian population.

KEYWORDS: Awareness, Preventive practises on Respiratory health, exposure, Adults Indian Population.

INTRODUCTION

According to World Health Organisation (WHO), health is defined as a state of complete physical, mental and social well-being and not merely the absence of disease. Health related behaviour can affect an individual's health condition.^[1,2] The majority of the disease burden in rural India is due to respiratory diseases.^[3]

The diseases are mainly attributed with exposure to indoor pollution, solid cooking fuels, poor housing, low nutritional status and sanitary conditions. Chronic respiratory diseases like asthma, allergic rhinitis, COPD, rhino sinusitis are becoming increasingly prevalent.^[4] Several low and middle-income countries are undergoing changes that actually increase TB risk,^[5] such as rapid urbanisation with high population densities and increases rates of cigarette smoking.

There are different stages of human life, each stage plays an important role for growth and development of an individual.^[6] and exercise is a key contributory factor to a healthy lifestyle.^[7] Majority of the diseases are caused by an unhealthy lifestyle and these diseases can be prevented and controlled through health education and health communication. Health promotion is based on

health education, and health knowledge is the foundation of health education.^[8]

MATERIAL AND METHODS

This cross-sectional study was conducted among 693 people from different parts of urban and rural India. A pre-validated questionnaire via google form was uploaded. Only those who agreed to take part in the study were considered. The adult respondents were both male and female. The data was entered into Microsoft Excel and analysed (Microsoft Corporation, Redmond, WA, USA).

RESULTS AND DISCUSSION

Table 1: Age (in years)

Characteristics	No of participants (Out of N=693)	%
Age		
18-30	577	83.26
31-40	40	5.77
41-50	35	5.05
Above 50	41	5.92

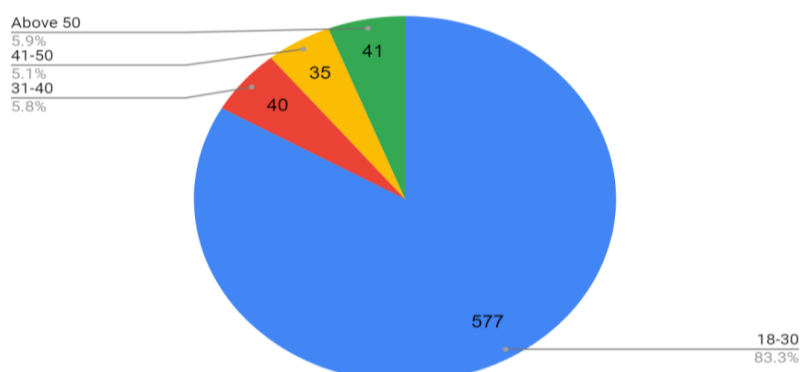


Fig 1: Age distribution.

Table 2: Gender distribution.

Gender	No of Responses (N=693)	%
Male	360	51.95
Female	333	48.05

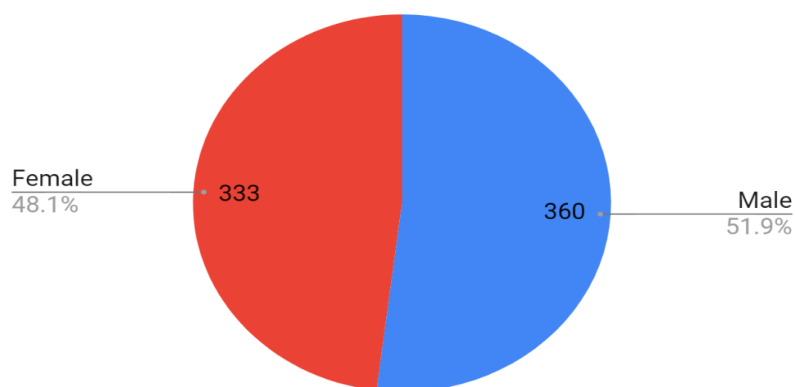


Fig 2: Gender distribution.

Table 3: Years of Education.

Years of education	No of responses (N=693)	%
0-5	7	1.01
6-10	30	4.33
11-15	417	60.17
16-20	226	32.61
21+	13	1.88

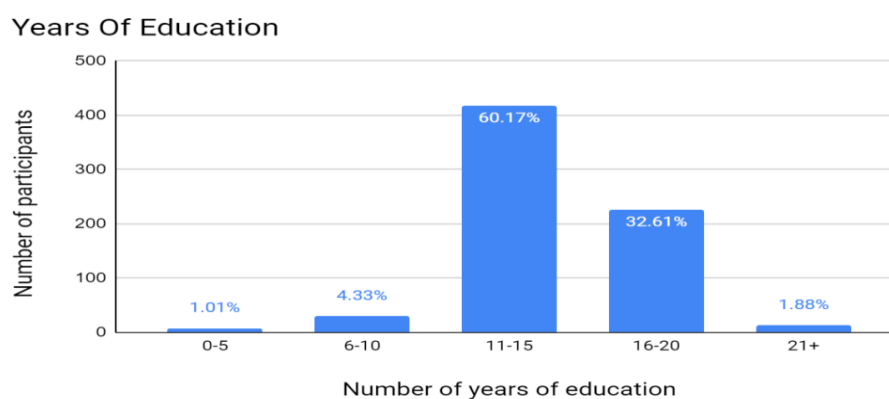
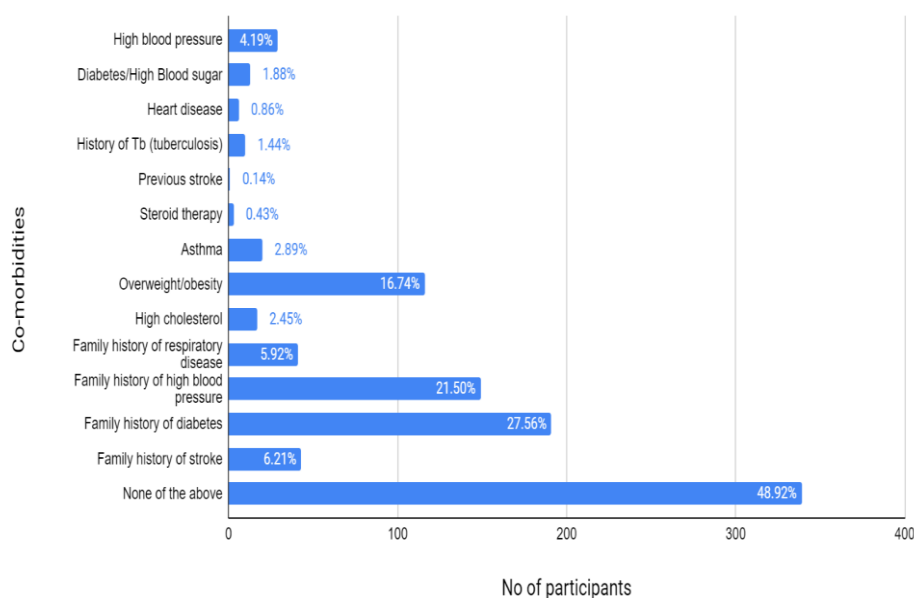


Fig 3: Years of education.

Table 5: Co-morbidities.

Co-morbidities	No of responses (N=693)	%
High blood pressure	29	4.19
Diabetes/High Blood sugar	13	1.88
Heart disease	6	0.86
History of Tb (tuberculosis)	10	1.44
Previous stroke	1	0.14
Steroid therapy	3	0.43
Asthma	20	2.89
Overweight/obesity	116	16.74
High cholesterol	17	2.45
Family history of respiratory disease	41	5.92
Family history of high blood pressure	149	21.5
Family history of diabetes	191	27.56
Family history of stroke	43	6.21
None of the above	339	48.92

**Fig 4: Co-morbidities.****Table 6: Exposure to air pollutants.**

Exposure to air pollutants	No of responses(N=693)	%
Exposed to smoke from pooja (agarbatti, dhoop)	231	33.33
Exposed to smoke from mosquito repellent coils	154	22.22
Exposed to smoke from Chula, firewood	61	8.8
Exposure to dust or chemicals	207	29.87
None of the above	313	45.17

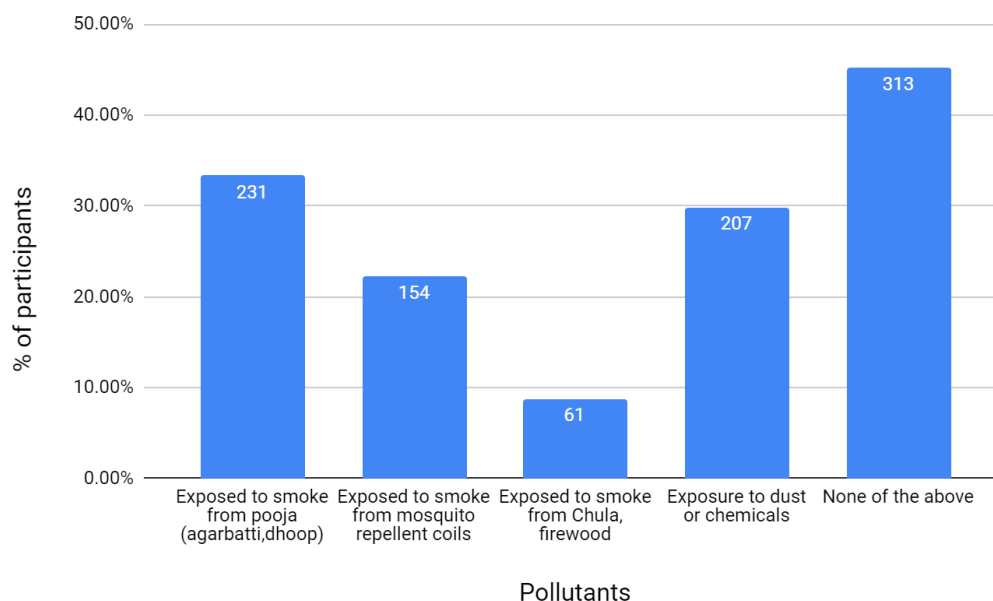


Fig 5: Exposure to pollutants.

Table 7: Cigarette/beedi/tobacco smoking.

Cigarette smoking?	No of responses (N=693)	%
Yes	113	16.31
No	580	83.69

Table 8: Number of years of active smoking.

Smoking since	No of responses (N=113)	%
<1 month	3	2.65
1-6 months	3	2.65
6 months-1 year	1	0.89
1-5 years	53	46.9
5-10 years	20	17.7
10-15 years	6	5.31
15-30 years	7	6.2
30-50 years	4	3.54
50+ years	1	0.89
(blank)/No response	15	13.27

Table 9: Second hand exposures to pollutants.

Second hand smoke exposure	No of responses (N=693)	%
Yes	120	17.32
No	573	82.68

Table 10: Symptoms experienced.

Symptoms	No of responses (N=693)	%
Fatigue	184	26.55
Breathlessness	52	7.5
Frequent cough	45	6.49
Frequent, long lasting chest infection	3	0.43
None of the above	460	66.38

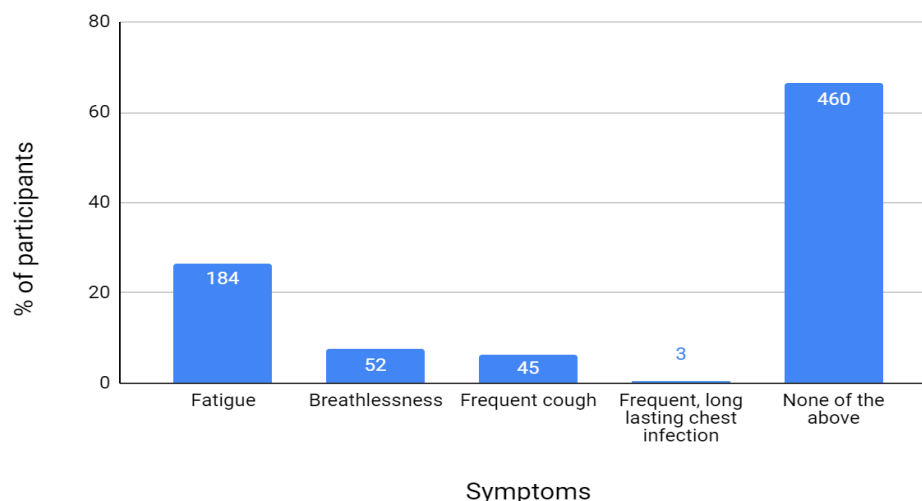


Fig 6: Presence of respiratory symptoms.

Table 11: Frequency of exercise.

Frequency of exercise	No of responses (N=693)	%
2 days/week	192	27.71
5 days/week	221	31.89
Rarely/Never	280	40.4

Table 12: Breathing exercises/pranayama practiced

Breathing exercises/pranayama	No of responses (N=693)	%
Everyday	61	8.8
Occasionally	310	44.73
Never	322	46.46

The total number of respondents in the present study were 693, out of which 51.95% were males and 48.05% were females. They were from age groups, 18-30yrs {83.26%}, 31-40yrs {5.77%}, 41-50yrs {5.05%} and above 50 yrs.{5.92%}.

Regarding the co-morbidities the 4.19% respondents reported High blood pressure (BP), 1.88% Diabetes mellitus (DM), 0.86% Heart disease, 1.44% Tuberculosis (TB), 0.14% Previous stroke, 0.43% steroid therapy, 2.89% asthma, 16.74% obesity, 2.45% high cholesterol, 5.92% Family history of respiratory disease, 21.5% Family history of high BP, 27.56% Family history of DM, and 6.21% reported Family history of stroke.

As per EvaS *et al.*,^[9] both high blood pressure and the use of beta-blockers, but not the use of other antihypertensive medication, are associated with reduced lung function in a general adult population. Majid R^[10] and others revealed that lung function is impaired in people with type 2 DM. Clemente J *et al.*^[11] reported in their study that preventive measures are needed to limit viral infection of lung. As per the work of H Kim and others,^[12] asthma is the most common respiratory disorder and contributes to significant morbidity and mortality. In most patients, asthma control can be achieved through the use of avoidance measures and appropriate pharmacological interventions. As per

Stephen W L^[13] obese patients tend to have higher respiratory rates and lower tidal volumes. M Manji and others^[14] revealed that the magnitude of residual lung function abnormalities among patients with tuberculosis is high despite successful administration of anti-TB medications.

The respondents reported that regarding exposure to air pollutants, 33.33% have been exposed to smoke from incense sticks, 22.22% from mosquito repellent coils, 8.8% from firewood and 29.87% from dust or chemicals. S Rana^[15] revealed that Incense produces particulate matter that can deposit in the respiratory tract, and elevates airborne concentrations of carbon monoxide and benzene thus incense sticks should be considered a source of indoor pollutants in rooms in which it is regularly burned. M Islam and others^[16] reported that public health programs should spread awareness among people regarding the negative health effect of using mosquito repellent.

Regarding cigarette/beedi/tobacco smoking, 16.3% agreed to cigarette smoking and 17.32% had been exposed to second hand smoke. Y Khan and others^[17] reported almost all of the factors for most cancers are tobacco smoking related. As per C Flexeder and others,^[18] exposure to second hand smoke may lead to respiratory symptoms.

The respiratory symptoms experienced by the respondents were fatigue (26.55%), breathlessness (7.5%), frequent cough (6.49%), frequent and long-lasting chest infection (0.43%). M Gruet^[19] reported that fatigue is prevalent in respiratory disease and it negatively impacts the daily life of the patient. C J Britto *et.al*^[20] revealed that preventive measures are needed in respiratory viral infections.

Regarding the frequency of exercise, 27.71% respondents reported 2 days/week, 31.89% 5 days/week and 40.4% reported no exercise. 8.8% reported that they performed breathing exercises daily, 44.73% practiced it occasionally and 46.6% had never performed breathing exercises. J Kerr and others^[21] reported ambulatory assessment of individuals performing moderate to vigorous physical activity showed more physically active status than those engaging in indoor only physical activity. S Agnihotri *et.al*^[22] revealed that Pranayama, a component of Yoga is one of the best remedies which helps to tackle respiratory illnesses caused by air pollution and other naturally occurring respiratory illness.

CONCLUSION

The ongoing rapid expansion, development and urbanisation of India may lead to increased frequency of respiratory diseases resulting in burden on scarce healthcare resources. Behavioural modification is the first step for a healthy life. Practices of healthy behaviour are very crucial for disease prevention, control and individual well-being. The need of the hour is more holistic approaches to disease prevention and health promotion.

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