

Brief Communication

Socio-demographic Correlates of Respiratory Disorders in East Sikkim.

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Abstract: A noticeable increase in health care burden from the various respiratory sicknesses including tuberculosis in India as well as in several areas of the world had been observed. The change in epidemiology and clinical spectrum of the respiratory sicknesses is a global concern. An analytical study with case control design on socio-demographic correlates of respiratory disorders was conducted on 110 individuals in the age groups of 10 years and above, who were permanent residents of east Sikkim for two months duration. Age and Sex matching was done to identify each case with its corresponding control and Simple random sampling method was applied to select the case and control for the study. Chi Square Test was applied for univariate analysis and multiple logistic regression analysis was done to study the independent effect of each variable over the outcome.

Thirteen (13) risk factors marital status, type of fuel used literacy status, smoking habit passive smoking, overcrowding, H/O of chronic respiratory illness within last 5 years, pets at home, H/O of chronic exposure to allergens, family H/O of chronic exposure to allergens, parasitic diseases, psychiatric and H/O of chronic respiratory illness within past 5 years.

Key words: Respiratory disorders, Correlates, Socio-demographic

INTRODUCTION

The respiratory disorders affect every community, the people of the sexes and all age groups and the suffering ranges from mild to serious forms of the science that are often fatal in nature. Moreover, there are complex and confounding associations and relationships with infections and infestations, air pollution, tobacco smoking and environmental exposure^{1,2,3}, indoor pollutants such as combustion fumes from cooking, paints, house hold cleaning devices, allergens, house dust mites, fungi, dampness, humidity, congestion etc are likely to cause respiratory sicknesses and tuberculosis.^{4,5} The risk factors such as smoking, tobacco consumption, humidity, indoor pollution, ETS, infections, petrol/diesel exhaust, allergens are common but environmental pollution. Industrial/occupational hazard are less in the Sikkim as compared to non hilly areas. Having mostly difficult geographic terrain with lack of roads and transport, connecting the rural areas, Sikkim finds difficulties in resolving these problems especially during the rainy season, when most of the roads are damaged badly or washed away due to landslides. Therefore, people report to the health care facilities usually very late and this sometimes proves fatal for them. With this background information, this study was conducted to identify the potential risk factors, which are responsible for respiratory disorders in East Sikkim.

MATERIAL & METHODS

Data collection procedure: Individuals who visited central referral hospital with the respiratory sicknesses, were interviewed and examined thoroughly and the findings were recorded on a format designed for the purpose. All the individuals, were subjected to routine x-ray, blood examination, and sputum examination. All the control cases and test cases suffering from respiratory sicknesses (excluding tuberculosis) were subjected for PFT (Pulmonary Function Test) by Automated Computerized PFT Machine. Paracentesis was done in cases of pleural effusion and the aspirated fluid was examined for biochemical, cellular, cytological (>50 years), microbiological examination including AFB. The people from different parts of East District of Sikkim who did not present with any respiratory illness were interviewed and examined as control subjects for study. Thorough clinical examination, investigations and free referral services were provided to all the individuals included in the study.

Data Analysis: The collected data were tabulated and analyzed by using the SPSS (Statistical Package of Social Science) version 10.0 windows. Findings were expressed in terms of proportion. Chi Square Test was applied for univariate analysis and multiple logistic regression analysis was done to study the independent effect of each variable over the outcome. In this study, p value<0.05 was considered as statistically significant.

RESULTS

In this study population, majority (54.5%) were males and majority belonged to the age group below 30 years, which comprised of 58 (52.7%). Here, majority (63.6%) were Hindus, among which maximum belonged to the Nepali Community; 54.5% of the total population were married, 81.8% were literate and 37.3% had smoking habit.

This study revealed that respiratory illness was significantly higher among those who were married, those who used fossil fuels for cooking, were illiterates, smokers and those who had history of passive smoking of more than 2 years. It was also observed that respiratory illnesses were significantly higher in people residing in over crowded households, those with history of chronic respiratory illnesses within last 5 years, having pets at home, having chronic exposure to allergens and who gave a family history of chronic exposure to allergens. Thus, respiratory infections were significantly higher among those who had parasitic diseases and psychiatric illnesses attributing to respiratory distress.

The multiple logistic regression analysis for correlates of respiratory diseases identified that the presence of overcrowding, history of chronic exposure to allergen, family history of chronic respiratory illness, history of chronic respiratory illness with last 5 years, smoking habits of psychiatric illnesses was independently associated with respiratory diseases. Here we found that those with family history of chronic respiratory illness within last 5 years were not statistically significant in univariate analysis but it had become highly significant in multivariate analysis. From the univariate and multivariate analysis we could identify the confounders of respiratory disorders as marital status, use of fossil fuels, literacy status, passive smoking history of exposure to chronic allergy and parasitic disease affecting lung.

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