RESPIRATORY MORBIDITY PROBLEMS IN COOKS – MOSTLY WOMEN – DUE TO INDOOR AIR POLLUTANTS IN KITCHENS OF DIFFERENT HOUSES IN AND AROUND VISAKHAPATNAM CITY, ANDHRA PRADESH, INDIA

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Abstract: As a part of the comprehensive study on the Impact of Industrialization and Urbanization on the Environment of Visakhapatnam area, we have taken up the study covering Ambient Air Quality, Water Quality of different sources of drinking water, Health Status, Biodiversity and Socio-economic aspects. While analyzing the data in the project of health status, it was observed that the respiratory morbidity is more prevalent in women compared to men. Similarly among cancer patients also the percentage of women is higher than men. The reason for the above can not be attributed to occupational health or others, as most of the women are house wives. So, we came to a conclusion that it could be due to indoor air pollutants and took up a detailed study on Indoor Air Quality with special reference to kitchen environment. There are no studies reported on the indoor air quality in Visakhapatnam. In the studies reported earlier in India and at other places, there are several drawbacks in the sampling, selection of sampling points and monitoring patterns. First time, we considered all the points and taken up a comprehensive study on the assessment of indoor air quality in the port based industrial city, Visakhapatnam. The following important points have been considered which were not taken into account by the earlier researchers; Monitoring of air quality in different types of houses, monitoring of air quality while actual cooking (food preparation) is in progress, and simultaneous monitoring of outdoor and indoor air qualities. Assessment of indoor air quality with reference to SO₂, NO₂, CO, SPM, RSPM, Toxic Metals, PAH’s etc. in the kitchens of different houses like thatched, tiled and concrete slab bed buildings with varying ventilation conditions in all the selected areas covering industrial, traffic, residential and rural areas, has been taken up. The air sampling was carried out while the actual cooking process is in progress, where different types of fuels such as dried cattle dung, wood, coal (traditional fuels), kerosene and LPG are used for cooking. The outdoor ambient air quality was simultaneously monitored. The results of the study will be presented and discussed, in the light of the type of house, nature of the fuel used, ventilation conditions and outdoor air quality. First time, we correlated the air quality data observed in the kitchens with the respiratory morbidity of the people of both sexes in different types of houses in various areas of the city. We attempted to bring awareness among women population regarding the effects of indoor air pollutants and suggest simple measures such that the cooks are not exposed to the high concentration of these air pollutants for longer durations and thus do not suffer from severe respiratory diseases.

Keywords: Indoor air quality, respiratory morbidity, cooks, and kitchens