

Indoor air pollutants and respiratory outcomes among minor adult Pakistani population: A cross sectional survey in Pakistan

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Abstract

Literature on association of cardiac outcomes with objectively measured indoor pollutants is scarce in the developing world. We aimed to assess the association of selected biomarkers with acute and chronic respiratory symptoms (cough, phlegm, bronchitis, wheeze, shortness of breathing (SoB)) and Asthma (spirometry and self-reported) and reversibility. A prospective cross sectional survey was conducted in 2018. Multistage cluster sampling was used for selection of households and participants. Data was collected on 230 adult participants. European questionnaire and audiometry were used for respiratory health data collection. Indoor air pollutants were measured using real time data collectors. Higher level of formaldehyde was found to be associated with acute and chronic cough and phlegm. Higher CO₂ was found to be associated with increased risk of acute and chronic cough, sputum and phlegm and acute rhonchi. Lead was associated with lower risk of cough, phlegm and asthma and higher risk of difficult breathing. None of the measured pollutant was found to be associated with spirometry based asthma and COPD. Indoor air pollutants such as acetaldehyde, CO and PM were associated with respiratory symptoms, however further studies are required to establish strong association of these exposure with intended outcomes. Also methodological improvement in detection of such early biomarkers are needed to detect exposure at early stages and develop preventive strategies.

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Speaker Publications:

1. "Engaging general practitioners in public-private mix tuberculosis DOTS program in an urban area in Pakistan: need for context-specific approach".
2. "Preablation Stimulated Thyroglobulin/TSH Ratio as a Predictor of Successful I(131)Remnant Ablation in Patients with Differentiated Thyroid Cancer following Total Thyroidectomy".
3. "Comparing Lung Function of Textile Workers with the Healthy Pakistani Population".
4. "Risk assessment for arsenic-contaminated groundwater along River Indus in Pakistan".
5. "Pulmonary Tuberculosis Is Associated with Biomass Fuel use among rural Women in Pakistan: An Age- and Residence-Matched Case-Control Study".

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Biography:

Dr Unaib Rabbani is faculty in Family Medicine Academy Qassim KSA. Dr Rabbani has done fellowship in Community Medicine (FCPS) from Pakistan. He has several research projects and grants in his credit. He has also served as