ABSTRACT

A cross sectional descriptive study was conducted in Insein Township during September 2015 to identify the indoor air quality and occurrence of childhood respiratory tract infection. Eighty three mothers (or) caregivers of under five children from randomly selected seven wards were selected by systematic random sampling. A structured questionarrie was used to elicit the socio-demographic characteristics of the respondents, the sources of indoor air pollutants and occurrence of respiratory tract infections among the selected households. The indoor air nitrogen dioxide, carbon monoxide, carbon dioxide and particulate matter 2.5 level were measured by using Environmental test meter. This study revealed that the mean age of children was 2 years and mean age of respondents was 37 years. Mothers of the children were the main respondents. Mean per capita income was 50,000 kyats. Most of the family used electric stove. Indoor nitrogen dioxide, carbon dioxide and carbon monoxide levels were measured to be within normal limit while some households had indoor PM 2.5 level higher than reference value of 80 µg/m³. Number of households having elevated PM 2.5 level was found to be 10 (12%). Incense stick and anti-mosquito coils were most common sources of pollutants in the residences. Prevalence of ARI during last two weeks among under five children was 44.57%. Coughing was the most common symptom found in under five children. Association of use of fire wood as fuel and respiratory symptoms were found to be significant. It was found that use of incense stick increased the level of indoor particulate matter 2.5. Besides it was revealed that acute respiratory infections were more likely to occur with high (above 80 µg/ m³) level of indoor particulate matter 2.5.