

# ABSTRACT

## Background

Air pollution outdoors and at household level has been globally identified as a major contributing factor towards non-communicable diseases. Burning of biomass fuel is identified as a major contributor. This study assessed the prevalence and associated factors of selected cardio-respiratory health problems related to household air pollution among main female householders in rural settings in Gampaha.

## Methods

A cross sectional study among 15 rural public health midwife areas in Gampaha MOH, using probability proportionate to size cluster sampling with an interviewer administered questionnaire. SPSS software was used for analysis and  $p < 0.05$  was considered as significant.

## Results

Response rate was 93.4%. One third of the participants were aged 26 to 35 years with 77% being housewives. Biomass fuel was used by 34% as primary fuel and by 37% as a secondary fuel with 22% using unimproved biomass stoves. Indoor household cooking (87%) with 47% having access to chimney. Symptom prevalence, allergic rhinitis (29%), persistent cough (10%), persistent phlegm (14%). Monthly income, occupation, asbestos roofing, type of cooking fuel, place of cooking and availability of a chimney was significantly associated with respiratory symptoms.

## Conclusions and recommendations

Biomass usage and unimproved biomass stove use was significant among the study population. Selected respiratory symptoms were significantly associated with the type of fuel use and chimney availability. Carrying out health education on minimizing biomass fuel use, putting up regulations and policies in indoor plastic burning, biomass usage and to ensure adequate ventilation at building houses is needed. Further longitudinal analytical studies will help generate stronger evidence related to cardiovascular symptoms related to household air pollution.

**Key words:** Household air pollution, cardiorespiratory symptoms, biomass