

Environmental health literacy and household air pollution-associated symptoms in Kenya: a cross-sectional study

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Abstract

BACKGROUND: Household air pollution (HAP) is a significant source of the global burden of disease. Our objective was to evaluate the association between environmental health literacy (EHL), a domain of health literacy (HL) that describes the ability to use environmental health information to reduce health risks, and symptoms associated with HAP. **METHODS:** We performed a cross-sectional population-based study of 353 households in Kasarani, Kenya. One individual from each household was surveyed using our novel EHL survey tool. Baseline characteristics were compared between individuals who were symptomatic (i.e., experiencing cough, shortness of breath, phlegm production, wheeze, chest tightness, headache, eye irritation, or burns from cooking at least 5 times per month) versus individuals who were asymptomatic (i.e., experiencing none or symptoms no more than once per month). Multivariate logistic regression was used to determine the odds ratios (OR) of self-reported symptoms associated with HL, stratified by median EHL, adjusting for education, self-perceived health and solid fuel use. **RESULTS:** A total of 100 individuals (28%) reported experiencing one or more symptoms at least 5 times per month, including 31.2% of solid fuel users and 30.3% of non-solid fuel users. Among individuals with high EHL, higher HL was associated with lower risk of experiencing symptoms (OR = 0.26; 95% CI 0.10-0.67), however, there was no association among individuals with low EHL (OR = 0.85; 95% CI 0.34-2.13). Among solid fuel users, the association between HL and risk of experiencing symptoms was driven by individuals with high EHL (OR = 0.30; 95% CI 0.05-1.84), rather than those with low EHL (OR = 1.22; 95% CI 0.36-4.16). **CONCLUSIONS:** To the best of our knowledge, this was the first study to assess the association between EHL, HL, and HAP-associated symptoms. Our findings highlight the potential importance of EHL in promoting sustainable interventions to reduce symptoms associated with HAP from solid fuel use among communities in Kenya.

Author keywords

Environmental health literacy

Health literacy

Household air pollution

Solid fuel