Abstract

Climate changes are causing more intense and frequent heatwaves worldwide, which causes significant health hazards for vulnerable people like children and elderly population. Increasing temperature and heatwaves causes a number of heat related health problems like heat stroke. The purpose of the present study was to determine the heat related health vulnerabilities in children and elderly population, and to compare the heat level exposure and life efficiency between different age groups of children and elderly people in Lahore. Two questionnaire were designed one to target children and one for elderly people. The Questionnaire data of 384 respondents was used to evaluate the socio-economic factors (age, income, living environment conditions) heat exposure (urban green spaces, air conditioning facility, hours spent outdoors) and Sensitivity (age group, elderly, pre-existing illness, living alone). The study findings revealed that children of age 9-15 years (38.7%) and old people above age 60 (61.2%) are most effected with extreme temperature. They have the most reported heat related issues that includes heat stroke (45%), heat rash (10%), hyperthermia (10%), difficulties in breathing (15%), and heat exhaustion (20%). Socio demographic variables like monthly income, age, access to green space, air conditions, and average duration spent outdoors have a strong association with heat related sickness in children and old age people as ($p<0.05$). The heat tolerance test of children and old people determines that the old people are more prone to heat related sickness as (63%) old people were heat intolerant as compared to children. The heat vulnerability index revealed that people over the age 60 having pre-existing illness, living alone, with no access to air conditions and green space are more vulnerable to heat related health issues that any other age group. So there is a dire need of introducing protection measures and sustainable practices by Government for the health safety of vulnerable population against heatwaves.