ABSTRACT

Introduction

Climate change is the biggest global health threat of the 21st century. Its impacts scatter through every strata of the society placing the marginalized clusters such as refugees, women, children etc. at highest vulnerability scale and call for action at all levels. Adaptation enhances the resilience, whereas mitigation minimizes the anthropogenic forces of climate change. Therefore, climate change adaptation and mitigation at individual level is crucial initiative for a climate resilient sustainable development.

Objectives

To describe the knowledge, attitudes and factors associated with climate change adaptation and mitigation at individual level among school teachers in Kalutara District.

Methods

A descriptive study was done among 618 school teachers in three educational zones of Kalutara district using random cluster sampling. Cluster units were defined as Type1AB and Type 1C schools and 25 clusters were selected from 106 cluster units randomly. Self-administered questionnaire was developed and validated. It contained six sections of questions including twenty five equally weighted questions to assess knowledge and ten statements to assess attitudes. Data was analyzed using SPSS version.20. Categorical variables were described using frequency tables and charts, and continuous variables were presented using measures of central tendency and dispersion. Chi square test was performed to analyze factors associated with knowledge on climate change adaptation and mitigation and a P value of <0.05 was considered as statistically significant.

Results

The response rate was 98.8% [n=618] and the mean age of the study population was 43.6 years [SD=7.769]. More than 95% of the study population [96.45%, n=596] agreed that the global warming is happening and more than 85% of them [87.4%, n=540] knew about climate change. It was revealed that 23% of the study population had poor knowledge [<50 score in overall knowledge score] in climate change adaptation and mitigation at individual level. Satisfactory knowledge [50-75] was observed among 54.7% [n=338] of the participants and 22.3% [n=138] showed good knowledge [>75]. Favorable attitudes were observed among more than 65% of participants for all the statements on climate change adaptation and mitigation. Average family income [$p<0.0001$, df=2] and highest education qualification [$p<0.0001$, df=6] showed significant positive association whereas age [$p<0.0001$, df=2] had a significant negative association with good knowledge. Working duration [$p<0.0001$, df=8] and involvement in the school environmental society activities [$p<0.0001$, df=2] had a significant positive association with good knowledge while current grade [$p<0.0001$, df=4] had a significant negative association. Level of knowledge had no significant variation among male and female teachers.

Conclusions and recommendations

Overall knowledge on was poor among more than 20% of the teachers highlighting the need for school and community based awareness programs to be implemented to address the issue. TV programs, newspaper articles and infographics could be useful as advocacy tools. In addition to that teachers' training curriculums revisions, knowledge sharing forums would be beneficial to fill the knowledge gap between different strata of teachers. Further qualitative studies are recommended to describe multidimensional factors associated with individual level climate change adaptation and mitigation activities to implement targeted intervention.

Keywords: climate change; climate change adaptation and mitigation; knowledge