

ABSTRACT

Introduction

Sri Lanka is currently experiencing a growing proportion of older persons. Owing to prevalent health challenges and advancing technology, older persons engage more with Electronic Health platforms. In this context, understanding basic Electronic Health Literacy skills remains important.

Objectives

To assess Electronic Health Literacy, its associated factors, facilitators and perceived barriers in retrieving health related information online, and to develop an eHealth intervention package for reducing cardiovascular disease risk among older persons aged 60 years and above living in Colombo District, Sri Lanka

Methods

An interviewer-administered Electronic Health Literacy Questionnaire for Older Persons (EHLQOP) was developed, and judgemental validity was ensured. Construct validity and reliability were assessed among 424 older persons from six selected Divisional Secretariat Divisions of Gampaha District recruited through multi-stage cluster sampling.

A community-based cross-sectional study was conducted among 820 older persons living in Colombo District, selected using multistage cluster sampling. The prevalence of Electronic Health Literacy (EHL) was assessed using the validated EHLQOP and its associated factors through an interviewer-administered questionnaire. Electronic Health Literacy was dichotomised into “Good” and “Poor”, using a median-based cut-off. Associated factors of “Good EHL” were determined initially through the chi-square test followed by multiple logistic regression.

Facilitators and barriers to online health information retrieval by older persons were gathered through Focused Group Discussions. eHealth intervention package was developed to minimise cardiovascular disease risk among older persons and improve eHealth Literacy among older persons.

Results

Factorial validity and reliability of the three-factor model comprising Health, Digital, and Information Literacy were confirmed through satisfactory model fit indices and a Cronbach’s alpha coefficient of 0.88.

Prevalence of “Good EHL” among older persons living in Colombo District was 50.9% (95% CI: 47.5-54.3). After adjusting for confounding, the factors significantly and positively associated with “Good EHL” were: receiving government pension (AOR=4.48,

95% CI:1.99-10.08, $P<0.0001$), doing regular physical exercise (AOR=2.12, 95% CI:1.20-3.73, $P=0.009$), not consuming alcohol currently (AOR=2.38, 95% CI: 1.19-4.74, $P=0.014$), being and active member of the Elderly society (AOR=58.73, 95% CI: 20.59-167.48, $P<0.0001$), previous usage of eHealth materials (AOR=4.31, 95% CI: 1.68-11.09, $P=0.002$), everyday usage of eHealth materials (AOR=13.96; 95% CI: 3.93-49.58; $P<0.0001$), having some support for eHealth use (AOR=4.57; 95% CI: 2.55-8.21; $P<0.0001$), online health information being the main source of health information (AOR=4.39; 95% CI: 1.90-10.13; $P=0.001$), and accessing online health information through a self-owned device (AOR=4.24; 95% CI: 2.25-8.01; $P<0.0001$). Exposure to eHealth services at government health care institutions showed a significant negative association with “Good EHL” (AOR=0.16; 95% CI: 0.07-0.39; $P<0.0001$).

Three main themes built on several sub-themes were derived as individual, technological, and sociocultural influences of online health information retrieval by older persons during the Focused Group Discussions.

An eHealth intervention package was developed comprising WhatsApp groups formed for elderly societies to disseminate eHealth messages to reduce cardiovascular disease risk and to improve eHealth Literacy among older persons. Implementation of the package is to be done at the primary care level, while being mediated and monitored through the staff of the primary medical care institution.

Conclusions and recommendations

The EHLQOP tool, which covers health, digital, and information literacy, effectively measures eHealth Literacy in Sri Lankan adults aged 60 years and above. The findings showed that half of Colombo’s older persons lack sufficient EHL with government pensions, regular exercise, and eHealth engagement being positively linked to better EHL. Recommendations include using the EHLQOP in program assessments, validating it in Tamil, promoting EHL at policy levels, and ensuring age-friendly eHealth design. Additionally, youth engagement can help bridge eHealth literacy gaps and enhanced EHL can support self-care and health behaviour improvements under Sri Lanka's Integrated Care for Older People (ICOPE) initiative in primary health setting.

Key words: Electronic Health Literacy, eHealth Literacy, older persons, eHealth intervention