Development and validation of Smartphone based Health Education Module towards the prevention of respiratory tract infection in Malaysian Hajj pilgrims


Department of Microbiology and Parasitology, School of Medical Sciences, Universiti Sains Malaysia; Faculty of Medicine, Medical Campus, Universiti Sultan Zainal Abidin; School of Computer Sciences, Universiti Sains Malaysia; Faculty of Health Sciences, Gong Badak campus, Universiti Sultan Zainal Abidin, Terengganu, Malaysia; Unit of Biostatistics and Research Methodology, School of Medical Sciences, Universiti Sains Malaysia Health Campus; Centre for Language Studies and Generic Development, Universiti Malaysia Kelantan, Bachok, Kelantan, Malaysia

ABSTRACT

Objectives: We aimed to develop and evaluate the efficacy of a health education program for increasing knowledge, changing attitudes and promoting preventive practices to reduce the incidence of RTIs among Malaysian Hajj pilgrims.

Methods: A quasi-experimental study was conducted among 132 Hajj pilgrims attending Hajj orientation programme organized by a private Hajj companies. Hajj pilgrims were sequentially enrolled and assigned to receive smartphone health education application in the intervention group (n = 66) and another different smartphone application on general Hajj process in the control group (n = 66). Data were collected from August 2018 to April 2019 at baseline prior to departure and post-intervention, immediately after return from Saudi Arabia using a validated questionnaire.

Results: There was no significant difference with respect to socio-demographic characteristics, KAP of the respondents in the intervention and control group at baseline. However, there was significant improvement in knowledge in the intervention group compared to the control group, based on time (p = 0.005, $\eta^2 = 0.075$) and group and time interaction (p = 0.031, $\eta^2 = 0.046$). Likewise, there was significant improvement in attitude based on time (p = 0.035, $\eta^2 = 0.044$). Similarly, there was significant main effect in practice based on time (p = <0.001, $\eta^2 = 0.155$) and interaction of group with time (p = 0.042, $\eta^2 = 0.041$).

Keywords: Health education, Hajj, respiratory tract infection