The effectiveness of a home-based interactive e-health educational intervention for middle-aged coronary heart disease (CHD) adults in improving total exercise, adherence rate, exercise efficacy and outcomes: A study protocol for a randomized controlled trial

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Introduction: Coronary heart disease (CHD) is the leading cause of death globally, and e-health educational programs have been proved to be an effective support to patients. Considering the advantages of e-health programs, as well as the growing number of young patients with CHD in Hong Kong, we plan to conduct a randomized controlled trial (RCT) to investigate the effectiveness of a home-based interactive e-health educational intervention for patients with CHD in terms of improvements in total physical exercise, exercise adherence and self-efficacy, risk factor profile, psychological outcomes, and quality of life.

Methods & Analysis: The RCT will be conducted in two government cardiac clinics in Hong Kong. Using a block randomization method, 438 eligible CHD clients will be randomly categorized to either the control group or the intervention group. All participants will receive usual care, but those in the intervention group will additionally receive the e-health educational intervention program. This program will consist of a one-hour educational session, one telephone follow up, and an e-health link on self-monitoring, which includes the recording of health measures and physical exercise across six months. Data will be collected at baseline, three-, and six-month intervals. The primary outcomes will be total physical exercise, which will be measured by the Godin–Shephard Leisure-Time Physical Activity Questionnaire. The secondary outcomes will consist of exercise efficacy and adherence rate, CVD risk profile, physical and psychological health outcomes (as measured by the Chinese version of the Health Survey Questionnaire and Hospital Anxiety and Depression Scale), and biological parameter. The data will be analyzed using mixed effect models and confirmatory factor analysis.

Ethics & Dissemination: The study complies with the Declaration of Helsinki and was approved by the University and Hospital Ethics Committee. The findings will be disseminated in international conferences and publications.

Biography
Eliza M L Wong has an extensive clinical experience. She is an academic and researcher and currently an Assistant Professor of Nethersole School of Nursing, Faculty of Medicine, the Chinese University of Hong Kong. She has a strong research interest in the field of e-health educational intervention in cardiac care and preventive care, cardiac rehabilitation and acute care. Her grants and international publications encompass a number of RCT studies in cardiac care and acute care including e-health educational intervention, pain management and wound care. She has published more than 25 peer reviewed journal articles and over 40 international conference papers.

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