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Effect of a smartphone-based intervention in coronary heart disease (CHD) prevention among working population: A pilot randomized controlled

Coronary heart disease (CHD) is the most prevalent type of cardiac disease among adults worldwide, including Singapore. This study aimed to develop and to examine a smartphone-based (CH) prevention programme in improving awareness, knowledge, stress level and healthy lifestyle behaviour related to CHD among working population in Singapore. A pilot randomized controlled trial was adopted to test the feasibility and effects of a newly developed smartphone-based CHD prevention programme. A Care4Heart Application (App) was developed as the main component of the programme. A total of 80 working population in Singapore were recruited and randomly assigned either the intervention or the control group. The participants in the intervention group (n=40) received a 4-week Care4Heart app and daily SMS, while those in the control group (n=40) were offered the health promotion websites only. Outcomes were measured using Heart Disease Fact Questionnaire-2, Behavioural Risk Factor Surveillance System and Perceived Stress Scale. Data were collected at baseline and 4 weeks after the programme. The IBM SPSS 22.0. was used to analyse the data. The smartphone-based CHD prevention programme significantly improved working population's knowledge ($p=0.008$), reduced stress level ($p=0.038$), and improved the behaviour towards blood cholesterol control ($p=0.033$) after 4 weeks of the programme end. In addition, it also showed some non-significant improvement including longer sustainability of physical exercise, higher tendency for quitting and weight loss in intervention group as compared to control group. Our newly developed 4-week smartphone-based CHD prevention programme is deemed feasible and effective in primary prevention of CHD.

Biography

Dr Wenru Wang has completed her PhD received her PhD at the Chinese University of Hong Kong, Hong Kong. She is now an Ass. Professor at Alice Lee Centre for Nursing Studies, National University of Singapore. She has published more than 70 papers in reputed international refereed journals and has been serving as an editorial board member.

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