The effect of mobile messaging apps on cardiac patient knowledge of coronary artery disease risk factors and adherence to a healthy lifestyle

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Abstract

Aims
To determine the effect of mobile messaging apps on coronary artery disease patient knowledge of and adherence to a healthy lifestyle.

Background
Due to the increasing incidence of coronary artery disease in recent years, interventions targeting coronary artery disease risk factors are urgent public priorities. The use of mobile technology in healthcare services and medical education is relatively new with promising future prospects.

Design
This study used a quasi-experimental design that included pre- and posttest intervention and control groups.

Methods
The study was conducted from January-April 2017 with both intervention and control groups, in a teaching hospital in Klang Valley. Convenience sampling was used with inclusive criteria in choosing the 94 patients with coronary artery disease (intervention group: 47 patients; control group: 47 patients). The pretest was conducted as a baseline measurement for both groups before they were given standard care from a hospital. However, only the intervention group was given a daily information update via WhatsApp for 1 month. After 1 month, both groups were assessed with a posttest.

Results
The split plot ANOVA analysis indicates that there is a significant and positive effect of the intervention on coronary artery disease patients’ knowledge on coronary artery disease risk factors ($\text{F(1, 92)} = 168.15, p < 0.001$) with a large effect size ($\text{eta}^2 = 0.65$). The mobile messaging app also significantly improves the patients’ adherence to a healthy lifestyle ($\text{F(1, 92)} = 83.75, p < 0.001$) with a large effect size ($\text{eta}^2 = 0.48$).

Conclusion
This study concluded that WhatsApp was an effective health intervention in increasing coronary artery disease patients’ knowledge and subsequently increasing their adherence to healthy lifestyles.

Relevance to clinical practice
In clinical settings, mobile messaging apps are useful in information delivery and efficient patient monitoring.