Mobile phone messaging delivering encouragement, reminders and education increases patient compliance with recommended exercise and results in positive short-term health behaviours

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Implications for practice and research

► The use of messaging platforms by clinics and hospitals to deliver encouragement, reminders and education increases patient compliance with recommended exercise and results in positive short-term health behaviours.

► With short-term health behaviour change clearly identified, further research should consider how to use mobile devices to promote sustained change.

► Technology and its uptake is expanding, and continued research on best approaches for health messaging and reminders is needed.

Context

Mobile phone communication is growing rapidly across the globe with 7.6 billion subscriptions reported worldwide in 2017.1 There is quality evidence supporting the use of mobile phone communication by healthcare providers to enhance regular healthcare and provide informational support to improve health outcomes.2 This study by Chen and colleagues measured the improved health outcome of increased function in patients with a frozen shoulder when provided encouragement, reminders and education by mobile phone messaging.

Methods

The purpose of the study was to explore the effects of mobile device text message education, encouragement and reminders on shoulder exercise compliance and resulting functional change. The study used an experimental, basic randomised control design with two groups. The intervention group received a daily text message for 2 weeks. Five measures, the Simple Shoulder Test (SST), Visual Analogue Scale (VAS) for pain, range of motion (ROM) measurements, and self-reported exercise form and satisfaction questionnaire, provided data to determine the efficacy of the intervention. The participants (n=60) were recruited from one orthopaedic medical centre over a 7-month period. Descriptive statistics were provided for the sample. Analysis of covariance was performed to explore data from the measures.

Findings

The intervention and comparison groups were similar in all variables at baseline. Exercise compliance was significantly improved in the intervention group (p=0.03). Significant improvement in ROM (forward flexion, p=0.001; external rotation, p=0.001; and internal rotation, p=0.018) was found in the intervention group. The remaining outcome variables (abduction ROM, SST and VAS) were no different between the intervention and control groups. The authors suggest that since the participants were recruited after their second corticosteroid injection, the experience of pain was less and therefore change was more difficult to discern. The authors conclude that text messaging reminders, encouragement and education to patients effect a positive health behaviour change, at least in the short term.

Commentary

This study adds to the current evidence that messaging reminders, encouragement, and education to patients with specific health concerns results in positive health behaviour change. Thoughtful creation of appropriate messages, providing patient choice to accept such messages and delivery through a messaging platform support the principles of collaboration, patient centredness and fiscal responsibility. Mobile messaging communication is increasing in popularity and provides a convenient, flexible and affordable approach to engaging patients in self-care management.

Further research on messaging to change health behaviour and support self-care is needed. However, it is time to explore messaging in greater depth. This study demonstrated short-term behaviour change; however, there is a paucity of evidence on sustained change. One meta-analysis reported the positive effect was sensitive to intervention duration and type of disease.3 Further research could focus on the development of effective encouragement and education message interventions to be used with specific chronic diseases. Additionally, technology offers different platforms such as audio, video or other messaging or reminder applications that may be more suitable to specific patients. Fang and colleagues,4 in their systematic review, indicate that effective technology aimed at enhancing self-care management continues to evolve. It is important to continue to explore how the rapidly changing technology can be used to support and inspire people to be engaged in their health. Furthermore, research must address the social issues of using technology for self-care. Lupton5 suggests we consider the emotions evoked with the expectation of digital text messaging. She also suggests considering the invisible work imposed on healthcare providers.

Competing interests None declared.

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