OSTEOARTHRITIS AND SOFT TISSUES

P106 PLANNING AND DEVELOPMENT OF A LONG-TERM DIGITAL SELF-MANAGEMENT TOOL FOR OSTEOARTHRITIS: THE INTELLIGENT KNEE OSTEOARTHRITIS LIFESTYLE APP

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Background/Aims
There is strong evidence for beneficial effects of physical activity for people with knee osteoarthritis (KOA). While supervised exercise programmes are effective, they are resource intensive, typically of limited duration and hard to implement at scale. More accessible options should be developed to enable individuals to adopt and maintain appropriate physically active lifestyles. Smartphone apps can monitor activity and symptoms, providing feedback to support self-management. We aimed to co-design a KOA self-management app, with physiotherapists and people experiencing KOA, to support long-term physical activity.
Methods
We followed the Person-Based Approach to developing health interventions. We initially undertook a rapid review of clinical exercise guidelines and KOA position statements. Views from potential app users were elicited via focus groups, to determine attitudes towards physical activity, KOA self-management technology, and identify desired app features. Physiotherapists were interviewed to establish factors that feed into physical activity advice and recommendations in a clinical context, and determine which features they deemed appropriate to incorporate into an app. We then mapped established behaviour change techniques to potential features. Combining these sources of information, we developed guiding principles, then iteratively developed and refined the app through ''think aloud'' interviews with potential users and interviews with physiotherapists to assess appropriateness and safety.
Results
Literature scoping established positive effects for a range of exercise modes, with NICE guidelines highlighting physical activity, education and weight management as core treatments for KOA. Patient focus groups highlighted uncertainty about the potential benefits and/or harms associated with physical activity, as well as confusion regarding appropriate sources of information. Patients emphasised the importance of symptom tracking and the benefits of social support as an important factor in motivation to engage in and sustain activity. Interviews with physiotherapists revealed physical and psycho-social characteristics of patients to consider when recommending physical activities. Physiotherapists and patients both expressed the necessity for activities to be tailored to individual capabilities and preferences.
Conclusion
The Intelligent Knee Osteoarthritis Lifestyle App (iKOALA) is an evidence-based smartphone app to support long-term self-management for individuals with KOA. The app facilitates appropriate physical activity adoption and maintenance; provides feedback from linked wearable activity trackers; gives information and intelligently tailored physical activity options from patient preferences and symptoms. Broader self-management aspects include rehabilitation exercise content, symptom tracking and alerts, weight management tools and education resources. Crucially, for long-term maintenance, the app includes forum features, fostering social relatedness among users. The app has received positive feedback from potential users in terms of usability and perceived utility. Physiotherapists have provided positive clinical impressions and validated the appropriateness of the content and features. The app is undergoing extended user testing with patients, following which, we aim to assess the effectiveness of the app in a randomised trial.
Disclosure
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