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EDITORIAL

Upskilling the physical therapy workforce in evidence-based knee osteoarthritis care

Osteoarthritis (OA) is a musculoskeletal condition that causes joint pain, impairment in physical function, and reduced quality of life. In 2019, almost 530 million people across the world had OA, with knee OA comprising about 60% of cases.[1] In 2019, prevalence of OA had increased by 113% since 1990,[1] placing an ever-increasing burden on health care systems across the globe. Physical therapists play an important role in the management of people with knee OA. Clinical practice guidelines for knee OA highlight the critical importance of non-pharmacological non-surgical approaches as first-line interventions for managing the condition. Exercise and physical activity, along with patient education and weight control, are consistently and strongly recommended by major professional societies across the world.[2] Thus, physical therapists are well-placed to assist people with knee OA to self-manage their condition using exercise-based approaches. However, research in developed countries shows there is an under-use of first-line OA treatments such as exercise, education, and weight control[3] and an over-use of medications and surgical interventions[4] in community-based OA care.

One reason for this is that clinicians often feel under-prepared to provide evidence-based care for people with knee OA. An international cross-sectional survey in Australia, New Zealand, and Canada found more than half of the 1380 physical therapists and 696 final year physical therapy students involved reported that limitations in their knowledge of clinical guidelines were a barrier to delivering high-quality OA care.[5] Another reason is that people with knee OA often have inaccurate knowledge about OA, believing that "knee OA is bone on bone", is caused by "wear and tear" and will inevitably worsen over time.[6] Research suggests that patients who have such misconceptions about knee OA will be less likely to engage in exercise and activity and more likely to seek mechanical treatments perceived to replace worn cartilage (such as surgery or experimental treatments).[6] It is thus vital that physical therapists managing people with knee OA have accurate evidence-based knowledge about how best to manage knee OA.

Physical therapists have traditionally provided care to people with knee OA via in-person consultations. The COVID-19 pandemic has highlighted the important role that telehealth can play in delivering healthcare to people who cannot otherwise attend a healthcare facility in-person.[7] However, many physical therapists have not received any training in the delivery of care via telehealth. As a result, physical therapists and physical therapy students may have reduced confidence, knowledge, and skills to deliver effective telehealth care.[8,9] Given the many advantages of "digital physical therapy practice" to service users, service providers, and society, the joint Digital Physical Therapy Task Force of World Physiotherapy and the International Network of Physical Therapy Regulatory Authorities have recognised that the physical therapy profession needs clinicians with "understanding, skills, and knowledge of digital technologies and practice."[10]

We developed the free PEAK (Physiotherapy Exercise and physical Activity for Knee osteoarthritis) e-learning course (https://www.futurelearn.com/courses/peak) as part of a clinical trial[11] to teach physical therapists how to implement an evidence-informed exercise-based management program for people with knee OA. The PEAK program can be delivered via one-to-one consultations in-person or via telehealth, and the e-learning course teaches physical therapists how to use Zoom videoconferencing to implement the program. The PEAK program focusses on empowering the individual to self-manage their knee OA, through education an individualized home-based strengthening exercise and tailored physical activity plan. The course is supported by a series of patient and clinician resources that the physical therapist can download and use in clinical practice. These include a booklet about how to prepare for Zoom consultations, a booklet with exercise information and instructions for many different strengthening exercises, an OA information booklet, and a logbook for patients to record and monitor their exercise and physical activity goals. Access to a website of PEAK exercise videos is also provided for the physical therapist to use. The asynchronous e-learning course is structured

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over 4 weeks (approximately 2 hours per week) but can be completed more quickly if the learner desires. Time-limited access to the course is provided free of charge.

Our research suggests the PEAK e-learning course is effective. Our qualitative study[12] with 15 Australian physical therapists showed that they found the course to be high-quality, informative, and comprehensive when implemented as part of a clinical trial. Despite being unfamiliar with professional development via e-learning (because most physical therapy courses are typically in-person), the physical therapists valued the asynchronous self-directed online learning format, finding it accessible, flexible, and easy to accommodate in their own time. The PEAK e-learning course is also effective in the 'real-world.'[13] Using pre- and post-course surveys (n=1299 participants from six continents, predominantly physical therapists), we found that participants were more likely to use patient education, strengthening exercises, and physical activity in a knee OA treatment plan after completing the course. Compared to pre-course, those who completed the course reported a 75% increase (on average) in confidence with videoconferencing for people with knee OA. Survey data from a small subset of participants (n=149) four months later showed that the course had influenced the clinical practice of 69% of respondents by a 'moderate' or 'large' amount,[13] suggesting the course leads to translation of new knowledge/skills into clinical practice.

The PEAK e-learning course was originally built and delivered on the University of Melbourne's Learning Management System (until June 2021). Challenges with the platform for users external to the university,[12] including a 'clunky' registration process that resulted in considerable course attrition,[13] necessitated a switch to an external platform. With the assistance of international collaborators, this has also enabled the translation of the course into both Spanish (https://www.futurelearn.com/courses/peak-spanish) and more recently, Portuguese (https://www.futurelearn.com/courses/peak-portuguese). Translation into Mandarin is currently underway. Since April 2020, more than 10,600 people from 138 countries across the globe have registered for the free PEAK e-learning course, which shows the broad reach and uptake of an e-learning program that is made available free of charge to clinicians.

In light of this, we also developed and evaluated a physical therapist e-learning course about weight management for people with OA because almost half of physical therapists are not confident, or only somewhat confident, to discuss weight management and weight loss.[14] In a clinical trial involving 80 physical therapists, results showed that the course improved physical therapists' confidence in knowledge and skills in weight management and reduced weight stigmatized attitudes.[15] The course has been broadened to be appropriate for all clinicians and for the management of all chronic conditions and released free of charge (https://www.futurelearn.com/courses/eduweight). We have also developed an evidence-based 4-week course on hip and knee OA designed explicitly for patients (https://www.futurelearn.com/courses/taking-control-hip-and-knee-osteoarthritis). Clinicians can refer their patients to this free companion course to increase patient knowledge about OA and the role of different strategies for managing pain.

Physical therapists value accessible trustworthy evidence-based resources for professional development, and lack of time is a barrier to participation in educational courses.[16] Financial constraints related to costs of attending professional development are also a barrier, especially for physical therapists in resource-limited countries. Our work suggests that a self-directed e-learning approach is an effective method for educating physical therapists at scale and in multiple languages, enabling reach to clinicians in most countries across the globe.

Conflicts of interest

The University of Melbourne receives course fees from sales of FutureLearn course upgrades and unlimited subscriptions.

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