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BARRIERS AND FACILITATORS TO EXERCISE PARTICIPATION IN PEOPLE WITH HIP AND/OR KNEE OSTEOARTHRITIS

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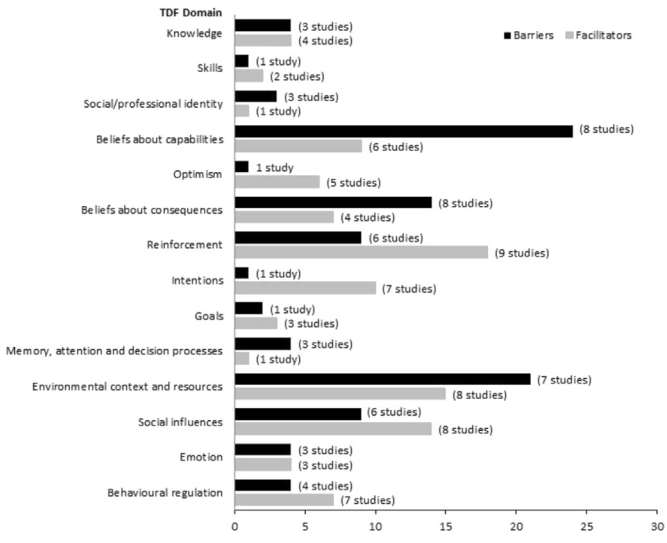
Purpose: Exercise is an integral component of non-surgical management of hip and knee osteoarthritis (OA) and is recommended in all clinical guidelines. High quality evidence of the benefits of exercise for improving pain and function is well-established, however these benefits are dependent on patient's initiation of, and adherence to, exercise. Several reviews describe a complex array of barriers and facilitators that influence the uptake and maintenance of exercise in people with hip and/or knee OA, however, to date, none have used an analytical framework, grounded explicitly in theories of behavior change to synthesis research findings.
The Theoretical Domains Framework (TDF) is one such framework, developed to simplify and integrate the plethora of behaviour change theories that exist into a single framework that can be used to assess and explain implementation problems and inform implementation interventions
The aims of this scoping review were to: i) systematically identify barriers and facilitators to participation in intentional exercise for people with hip and/or knee osteoarthritis and; ii) to systematically map identified barriers and facilitators to exercise participation to the Theoretical Domains Framework (TDF).
Methods: Systematic searches up until December 2013 were performed using MEDLINE (via PubMed), CINAHL, SPORTSDiscus and the Cochrane Library. Two independent reviewers screened studies for eligibility. Intentional exercises included both those prescribed by a health professional and those that were self-initiated. Reported barriers and facilitators were extracted by one reviewer, checked by a second reviewer, and mapped via consensus among the authors to the most appropriate domain of the TDF.
Results: Twenty eligible studies (13 quantitative, 5 qualitative and 2 mixed-methods) with a total of 4054 participants were included. A range of exercise programs were used in the included studies: aerobic activity, strengthening exercise, flexibility exercise, range of motion exercise, or a combination of strengthening, flexibility and endurance exercises. There were 101 identified barriers and 101 identified facilitators, covering all 14 domains of the TDF.
The largest numbers of barriers were mapped to Beliefs about Capabilities (24 from 8 separate studies) and Environmental Context and Resources (21 from 7 separate studies). The largest numbers of facilitators were mapped to Reinforcement (18 from 9 separate studies), Environmental Context and Resources (15 from 8 separate studies) and Social Influences (14 from 8 separate studies) (See Figure 1).



Conclusions: Facilitators and barriers to exercise participation were systematically mapped to a primary theoretical domain using the TDF. Barriers were most commonly mapped to Beliefs about Capabilities and Environmental Context and Resources whereas facilitators were most commonly mapped to Reinforcement, Environmental Context and Resources and Social Influences. This framework provides a useful basis towards a better understanding of the underlying mechanisms of these barriers and facilitators to exercise participation in people with hip and/or knee OA. It also provides guidance for the development and evaluation of implementation interventions designed to increase adherence to exercise in this population. Further research is required to investigate the effectiveness of behavior change interventions that specifically target these barriers and facilitators to exercise.

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IMPLEMENTING OSTEOARTHRITIS GUIDELINES IN UK PRIMARY CARE: MOSAICS CLUSTER RANDOMISED CONTROLLED TRIAL

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Purpose: Recommendations for osteoarthritis (OA) are not currently implemented in UK primary care. The MOSAICS study determined the clinical and cost effectiveness of a model OA consultation as a method of implementing core guideline recommendations for OA.
Methods: Health survey; two arm cluster randomised controlled trial; 15,083 (53%) eligible responders 45 years and over from eight general practices; 525 patients consulting for peripheral joint pain during the 6m recruitment period of the cluster trial (4 intervention, 4 control practices). Intervention practices received practice updates on core OA recommendations (diagnosis; written information [patient generated OA guidebook], exercise and physical activity, healthy eating, pain management); General practitioners (GPs) received four hours of in-practice training and simulated consultations on a model OA consultation; Practice Nurses received four days of education, workshops and training with simulated consultations for a model OA consultation; Participants randomised in the intervention arm received a consultation with the GP for joint pain, and as appropriate an OA guidebook and consultations for OA with a practice nurse (up to 4 visits). Clinical effectiveness was measured by the SF-12 physical component score (primary outcome) at 6 months, OMERACT/OARSI responder criteria, joint pain intensity, pain self-efficacy; Uptake of self-management measured by self-reported Quality Indicators of OA care and patient enablement. Cost-consequence and cost-utility analyses were also undertaken.
Results: Mean (SD) practice size and number of GPs for intervention and control practices were 10240 (9174.8) & 6.0 (6.1) and 6983 (2060.7) & 5.2 (2.9) respectively. Of eligible participants, 288 were recruited from intervention practices and 237 from control practices. The mean age (SD) was 67.3 (10.5) and 59.6%, were Female. At three months self-reported consultations with a practice nurse for joint problems were n=70 (29%) in the intervention group compared with n=26 (13.5%) in the control arm. At six months there were no statistically significant differences in SF-PCS, EQ5D or in other health outcomes between intervention and control, except for a borderline significant finding in reduction of knee pain intensity in the intervention arm compared with control (p=0.055). Uptake of self-management was statistically significantly greater (Odds Ratios) in the intervention arm compared with control for all core OA recommendations: provision of written information (e.g. exercise) (4.36, p<0.001), support for self-management (3.29, p=0.025), referral for losing weight (3.72, p=0.003), use of muscle strengthening exercises (2.54, p=0.03) and simple analgesia 3.97 (p=0.003). There was a reduction in self-reported use of oral NSAIDs in the intervention arm compared with the control arm (0.18, p< 0.001). Enablement mean (SD) scores were greater in the intervention arm compared with the control arm at 6 months and this was also statistically significant (3.21 (3.42) vs 2.28 (2.96), p=0.03). Visits to the orthopaedic surgeon were lower in the intervention arm compared with the usual care arm (p=0.02). Time off work and associated productivity cost were lower in the intervention arm.
Conclusions: A model OA consultation can increase the uptake of OA recommendations in primary care but does not increase health status or quality of life. An integrated model with an emphasis on support for self-management and lifestyle changes had a borderline significant impact on pain reduction in the knee. The model OA consultation also reduced uptake of NSAIDs and visits to an orthopaedic surgeon. Defining an integrated model consultation supported by training workshops can be an effective way of implementing clinical guidelines.