CONFERENCE ABSTRACT

ARMED with ESCAPE-pain: A feasibility study of a virtual weight management, education, and physical function programme for overweight patients with knee osteoarthritis at the primary/secondary care interface
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Introduction: A feasibility study of a virtual weight management, education, and physical function programme for overweight patients with knee osteoarthritis at the primary/secondary care interface

Abstract: This study was designed to test the feasibility of running a randomised controlled trial to compare the effectiveness of a combined virtual weight management, education, and physical function programme for overweight patients with knee osteoarthritis: ARME (Arthritis Rehabilitation through the Management of Exercise and Diet) with the usual care virtual ESCAPE pain (Enabling Self-management and Coping with Arthritic Pain using Exercise (https://escape-pain.org/ESCAPEpain)).

Participants: Forty-three patients with knee osteoarthritis were recruited from a combined primary/secondary care waiting list and were allocated to either a virtual six-week intervention group (ARMED) or to the virtual six-week usual care ESCAPE pain group.

Results: Forty-three patients 33 female and 10 male patients were assessed and completed the study. The average attendance was 9.5 sessions with 9 patients attending all 12 sessions. 63% of patients attended 10 or more of the 12 sessions. The mean age attending the class was 57.1 years with a standard deviation of 8.9 years. Preliminary checks were conducted to ensure there was no violation of normality or linearity. An independent samples t test was conducted to compare age, height, weight, BMI, or in total pain, total activities of daily living or total quality of life at baseline. There were no significant differences noted. Mean BMI pre-intervention was 34.4 kg/m² with a standard deviation of 8.9 kg/m² and mean weight was 95.89kgs. All patients completed the KOOS knee score (Roos et al. 1998) to assess pain, function, and stiffness, the Short Warwick-Edinburgh Mental Well Being Scale (SWEMBS 2008) to evaluate anxiety and depression, and the EQ5D5L. A mixed analysis of variance was conducted with weight the within subjects’ factor, and ARMED the between subjects’ factor at pre-intervention, 6 weeks post intervention and 12 weeks post
intervention. This was repeated for BMI and also for Pain, Function, EQ5D5L and quality of life. Both the ARMED and the ESCAPE-pain groups improved significantly on the KOOS outcome measurements of pain and function over 6 and 12 weeks with no significant differences between the two groups. There was little change noted in weight change for the ESCAPE pain group, but the ARMED group showed a mean decrease of 2.1kgs at 6 weeks and 3.3kgs at week 12. This change was significant $F_{2,64} = 6.018$, $p=.004$, partial eta squared =0.158 (large effect size), but there was no significant difference in the outcome assessments for BMI or waist measurements at 6 or 12 weeks.

**Conclusions:** Evaluation of preliminary data from this feasibility study supports this virtual intervention combining education, exercise, and weight management in this patient group. This innovative virtual intervention may improve user acceptability both among those with knee osteoarthritis and weight management problems in primary care and their clinicians and may assist in changing the current pattern of onward referral to secondary care before an adequate trial of conservative management.