

A Mixed-Methods Feasibility Study Exploring the Cultural Adaptation of Walk with Ease to the United Kingdom

Kathryn R Martin^{1,2}, Toby O Smith³, Santosh Gaihre⁴, Gary J Macfarlane^{1,2}, Aileen Neilson⁵, Paul McNamee⁵, Rosalind Rae⁶ and Zoe J Morrison⁷,

¹Epidemiology Group, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, Aberdeen, United Kingdom, ²Aberdeen Centre for Arthritis and Musculoskeletal Health, University of Aberdeen, Aberdeen, United Kingdom, ³Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, Oxford, United Kingdom, ⁴School of Biomedical Sciences, Ulster University, Coleraine, United Kingdom, ⁵Health Economics Research Unit, University of Aberdeen, Aberdeen, United Kingdom, ⁶Business School, University of Aberdeen, Aberdeen, United Kingdom, ⁷Human Resources and Organisational Behaviour, University of Greenwich, London, United Kingdom

Background/Purpose: The Arthritis Foundation's Walk With Ease (WWE) is an evidence-based 6 week community-based walking program for adults with arthritis delivered in instructor-led or self-directed format. It has been shown to improve physical function, pain, stiffness and fatigue. WWE is also a Centers for Disease Control and Prevention-recommended physical activity (PA) program. In recent years, WWE has been scaled-up and expanded to communities across the United States (US), yet is little known outside North America. This study aimed to examine the relevance, acceptability and feasibility of WWE in a United Kingdom (UK) context, where walking for pleasure and transport is culturally embedded.

Methods: This 4 phase study was carried out in collaboration with community and patient partners: 1) Cultural adaptation; 2) WWE program; 3) Qualitative enquiry; 4) Future planning. Recruitment was primarily via invitation letter to persons registered in selected Aberdeen primary care practices. Eligible (≥ 18 years, doctor diagnosed arthritis (confirmed or self-report), and self-reported joint symptoms in last 30 days, BMI ≥ 25 kg/m², and <150 min/week of moderate/vigorous PA) and consented participants were randomised into 2 groups: WWE program or usual care. Descriptive statistics explored physical performance measures (PPM), symptoms and beliefs using physical performance assessment and survey data collected at baseline and post-6 week program. Participants' experiences of WWE were explored via video ethnography and narrative interviews, and analysed thematically.

Results: Of 149 participants, the majority were women (70%) aged 60 years (76%). OA was most prevalent (66%), followed by back pain (54%) and RA (13%); most also had at least 1 non-arthritis condition (79%). Among participants, 97 received the WWE program: 52 chose instructor-led; 45 chose self-directed. Follow-up was 80.4% at 6-weeks; 82.5% at 18-weeks. Average walk attendance across 5 walking groups was 63% (11.5/18 walks). Nearly all (99%) would recommend WWE to family or friends and 81% reported they were satisfied with the program. At 6 weeks, about half reported being at least moderately better in physical health (47%) and emotional

well-being (53%). Within both WWE formats, statistically significant differences representing improvement were observed at 6 weeks from baseline for PPM, symptoms and beliefs (table). Qualitatively, participants described liking and using the WWE guidebook but wanted a foldable exercise leaflet and expanded online resources. Positive experiences were reported, with emergent themes of improved motivation, mental health and social well-being.

Conclusion: Findings indicate that WWE is a relevant and acceptable walking program in a UK context. Wider implementation of this evidence-based program may benefit the physical health and well-being of people with arthritis.

Outcome Measures	Baseline Mean (SD)	6-Week follow-up Mean (SD)	Change (95% CI)	N
Lower extremity strength – chair stand, seconds				
Instructor-led	17.89 (7.02)	14.53 (5.29)	-3.36 (-1.74, -4.98)**	31
Self-directed	14.65 (4.67)	13.07 (4.18)	-1.48 (-0.57, -2.59)**	32
360° turn ability, seconds				
Instructor-led	3.70 (1.73)	3.26 (1.24)	-0.44 (-0.98, 0.10)	33
Self-directed	3.27 (1.80)	2.94 (1.48)	-0.33 (-0.64, -0.03)*	34
Single Leg Stance, seconds				
Instructor-led	10.88 (13.63)	14.09 (14.38)	3.21 (-0.19, 6.61) [§]	29
Self-directed	17.39 (19.37)	18.58 (15.28)	1.19 (-3.75, 6.12)	34
Walking speed, meters/second				
Instructor-led	0.80 (0.28)	0.89 (0.26)	0.09 (0.01, 0.16)*	33
Self-directed	0.87 (0.23)	0.94 (0.24)	0.06 (-0.02, 0.15)	34
Endurance – 2-minute step test, count				
Instructor-led	56.29 (25.79)	64.61 (26.61)	8.32 (0.10, 16.55)*	31
Self-directed	54.42 (19.22)	61.52 (19.82)	7.09 (1.24, 12.95)*	33
VNRS - Pain				
Instructor-led	4.92 (2.55)	4.50 (2.59)	-0.42 (-1.03, 0.18)	38
Self-directed	5.89 (2.41)	5.13 (2.30)	-0.76 (-1.38, -0.14)*	38
VNRS - Fatigue				
Instructor-led	4.74 (3.23)	3.79 (2.90)	-0.95 (-1.60, -0.30)**	38
Self-directed	4.84 (2.84)	4.32 (2.57)	-0.53 (-1.25, 0.19)	38
VNRS - Stiffness				
Instructor-led	5.34 (2.43)	4.53 (2.59)	-0.82 (-1.56, -0.07)*	38
Self-directed	5.79 (2.55)	5.03 (2.24)	-0.76 (-1.51, -0.02)*	38
Arthritis Self Efficacy – Pain				
Instructor-led	6.04 (2.26)	5.96 (2.33)	0.08 (-0.71, 0.87)	39
Self-directed	5.02 (1.67)	5.77 (1.91)	0.76 (0.09, 1.43)*	38
Arthritis Self Efficacy – Symptoms				
Instructor-led	6.13 (2.17)	6.73 (2.26)	0.59 (-0.08, 1.27) [§]	37
Self-directed	5.84 (1.88)	6.49 (1.85)	0.65 (0.02, 1.28)*	39
Rheumatology Attitudes Index (range 1-5)				
Instructor-led	2.78 (0.88)	2.44 (0.84)	-0.34 (-0.54, -0.14)**	38
Self-directed	2.56 (0.75)	2.29 (0.72)	-0.27 (-0.44, -0.11)**	39

CI-confidence intervals; SD-standard deviation; VNRS – visual numerical rating scale; [§]p<0.10, *p<0.05, **p<0.05, ***p<0.001