eHealth Interventions to Support Self-Management in People with Musculoskeletal Disorders: 'eHealth: It's TIME' – A Scoping Review

Marie Kelly[a,b], Brona Fullen[c], Denis Martin[d], Sinéad McMahon[c], Joseph G. McVeigh[a]

[a]Discipline of Physiotherapy, School of Clinical Therapies, College of Medicine and Health, University College Cork, Cork, Ireland [b]Department of Physiotherapy, Mercy University Hospital, Cork, Ireland; [c]School of Public Health, Physiotherapy and Sports Science, University College Dublin, Dublin, Ireland; [d]School of Health and Life Sciences, Teesside University, Middlesbrough, UK.

Introduction

eHealth-mediated interventions are considered an option to support self-management in those with musculoskeletal disorders (MSDs).

Aim

To chart the evidence regarding:

- eHealth modalities
- Musculoskeletal diagnosis
- Outcomes

Methods

Six databases (MEDLINE, CINAHL, PsycINFO, Embase, Scopus, Cochrane Database of Systematic Reviews), seven grey literature sources and reference and citation lists of included studies were searched from inception to July 2020. Published studies of adults with a MSD utilising an eHealth intervention to support self-management were included. Studies were limited to those published in English. Two reviewers independently screened all studies.

Systematic Review Registration

Open Science Framework (https://osf.io/29rd6) and published (Kelly et al., 2021).

Results

After screening 3377 titles and abstracts and 176 full-texts, 87 studies fulfilled the eligibility criteria (Figure 1). Most studies were published in the last five years (55%), with almost one-third originating in the USA (32%). The most common eHealth modality type was internet-based (35%) (Figure 2) with almost one half (47%) of studies involving participants with widespread musculoskeletal symptoms (Figure 3). The most commonly reported outcomes related to body functions (i.e. pain intensity) (n=67; 45%), followed by activities and participation (i.e. function) (44%), with environmental factors (i.e. healthcare utilisation) the least commonly reported (20%).

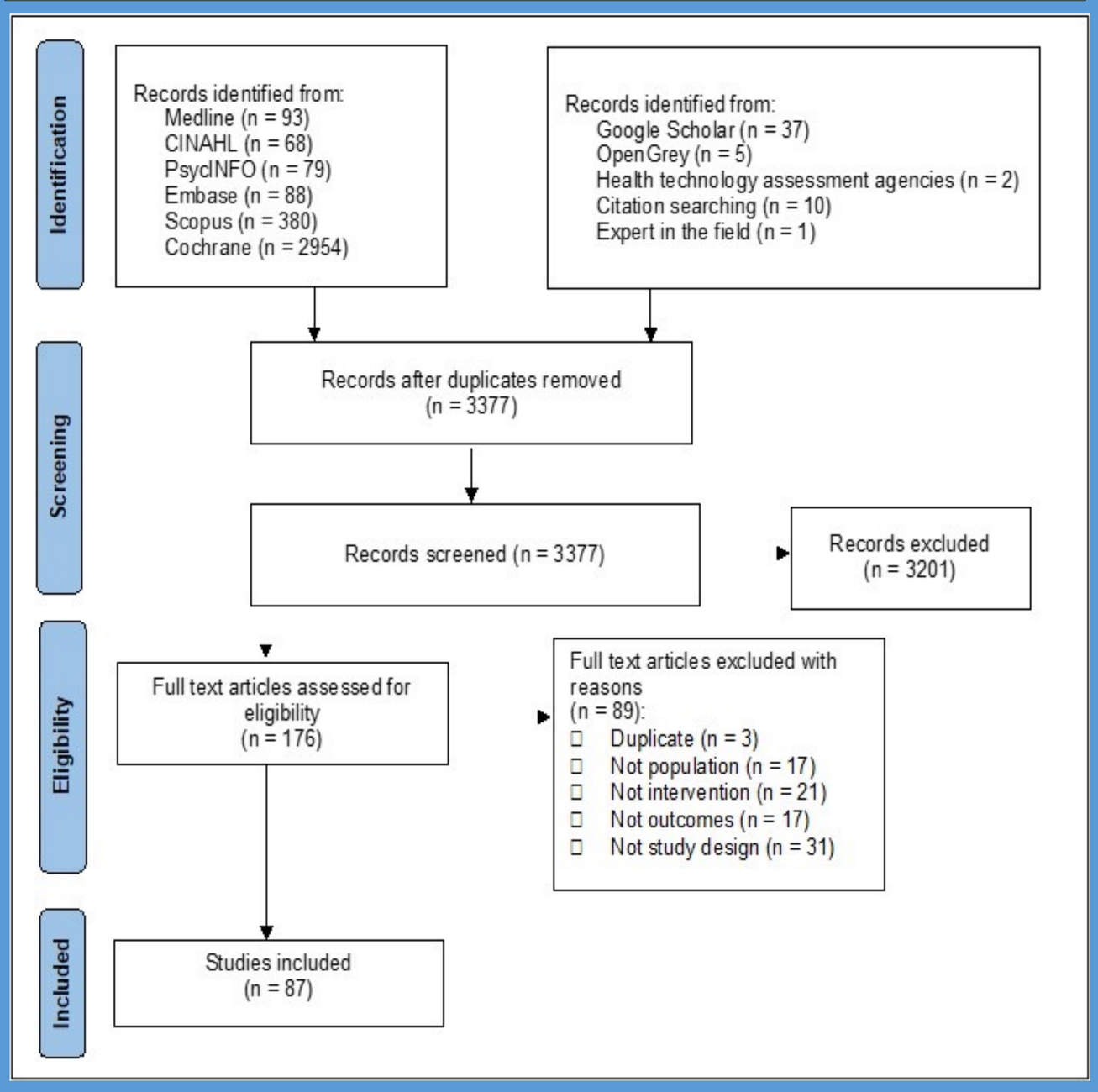

Figure 1: PRISMA Flow Diagram

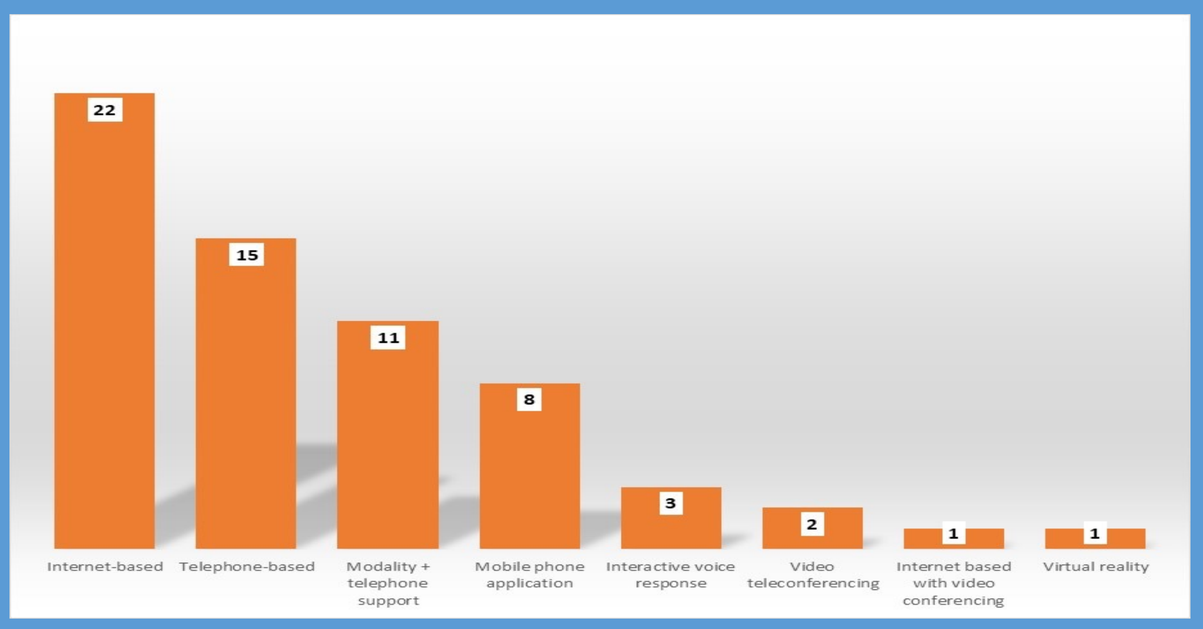

Figure 2: eHealth Modality Type (n=63)

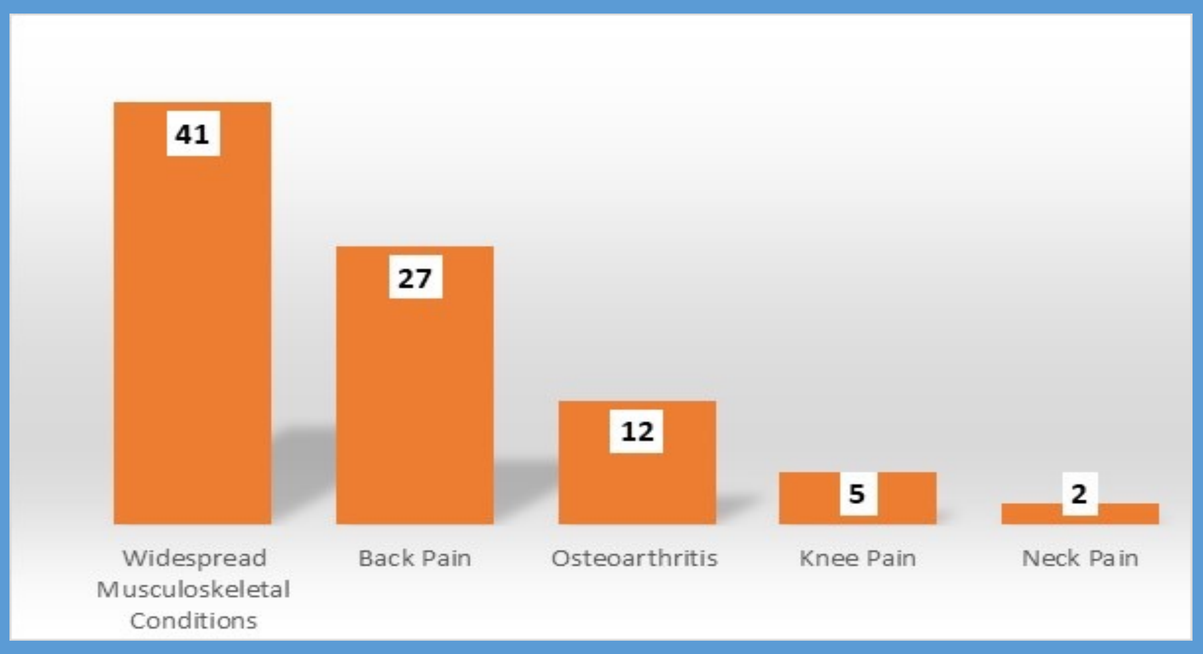

Figure 3: Musculoskeletal Diagnosis (n=87)

Table 1: Quantitative Study Outcomes

Common Outcomes	Description	Number of studies	Number of studies in which outcome improved
Body Functions	Pain intensity, pain interference, anxiety, depression, sleep, self-efficacy	67	30
Activities & Participation	Stress management, walking, function, employment	65	38
Environmental factors	Medication, health care utilization	17	7

*Based on the International Classification of Functioning, Disability and Health framework

Relevance for patient care

New strategies are urgently needed to support self-management for people with MSDs. eHealth interventions offer a promising solution. This scoping review will inform best practice in this field.

Conclusion

eHealth interventions appear to have potential in supporting self-management of those with MSDs. However, little is known about what might work best, for whom and in what circumstances. This systematic scoping review will synthesize the available evidence and identifying the characteristics of eHealth interventions that support self-management and inform best practice.

Reference

Kelly M, Fullen B, Martin D, McMahon S, McVeigh JG. eHealth interventions to support self-management in people with musculoskeletal disorders: a scoping review protocol. JBI Evid Synth. 2021 Mar;19(3):709-720. doi: 10.11124/JBIES-20-00147