Music and Movement for Health and Wellbeing in Older Adults

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Music and Movement for Health Research Team and Committees

Music and Movement for Health Study

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- Dr Brendan Kennelly (NUIG)
- Ms Catherine Maher (Health Service Executive)
- ALONE (National organisation supporting and empowering older people)

Independent Data Monitoring Committee
- Prof. Cathal Walsh (University of Limerick)
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- Andrew O'Regan (University of Limerick)

Public and Patient Involvement (PPI) Panel
- Members form Limerick Senior Forum, Tipperary Dance Platform, Active Retirement Ireland, Age and Opportunity, older adult dancers, teachers and Dance Limerick.

Trial Steering Committee (TSC)
- Dr Shaun Treweek (University of Aberdeen)
- Dr Helen Phelan (University of Limerick)
- Dermot O'Callaghan (Sing Ireland)
- Dr Colin Quigley (University of Limerick)
- Kristyn Fontanella (Dance Ireland)

Thanks to the core music and movement team

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Where our work exploring the benefits of dance started……

ACRM
AMERICAN CONGRESS OF REHABILITATION MEDICINE

Archives of Physical Medicine and Rehabilitation
journal homepage: www.archives-pmr.org
Archives of Physical Medicine and Rehabilitation 2015;96:141-53

REVIEW ARTICLE (META-ANALYSES)

Dance for People With Parkinson Disease: What Is the Evidence Telling Us?

Joanne Shanahan, BSc,[a] Meg E. Morris, PhD,[b] Orfhlaith Ni Bhriain, PhD,[c] Jean Saunders, PhD,[d] Amanda M. Clifford, PhD[a]

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Abstract

Objectives: (1) To appraise and synthesize the literature on dance interventions for individuals with Parkinson disease (PD); (2) to provide information regarding the frequency, intensity, duration, and type of dance used in these programs; and (3) to inform the development of future studies evaluating dance interventions in this population.

Data Sources: Eight databases (MEDLINE, Cumulative Index to Nursing and Allied Health Literature [CINAHL], the Allied and Complementary Medicine Database [AMED], SPORTDiscus, PubMed, PubMed Central, Sage, and ScienceDirect) were electronically searched in April 2014. The references lists from the included articles were also searched.

Study Selection: Studies retrieved during the literature search were reviewed by 2 reviewers independently. Suitable articles were identified by applying inclusion criteria.

Data Extraction: Data regarding participants and the frequency, intensity, duration, and type of dance form used were extracted. The effect that each dance program had on defined outcomes and the feasibility of each program were also reviewed.

Data Synthesis: Thirteen articles were identified. The quality of studies varied, and methodological limitations were evident in some. The evidence evaluated suggests that two 1-hour dance classes per week over 10 to 13 weeks may have beneficial effects on endurance, motor impairment, and balance.

Conclusions: Dance may be helpful for some people with PD. This article provides preliminary information to aid clinicians when implementing dance programs for people with PD. Higher-quality multicenter studies are needed to determine the effect of other dance genres and the optimal therapy volume and intensity.

Archives of Physical Medicine and Rehabilitation 2015;96:141-53

Journal of Parkinsonism and Restless Legs Syndrome

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REVIEW

Dancing and Parkinson's disease: updates on this creative approach to therapy

This article was published in the following Dove Press journal:
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Number of times this article has been viewed

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Introduction: Parkinson's disease (PD) is associated with slowness of movement and balance disturbance. Anxiety and social isolation are common and quality of life (QoL) can be compromised. Dancing enables people with PD to participate in an enjoyable form of exercise within a group. This review provides an updated synthesis of the literature comparing dance to other interventions in people with PD.

Methods: Six databases were electronically searched. Relevant articles were identified using inclusion criteria. Data on participants, the dance intervention, and outcomes were extracted from suitable articles.

Results: Methodological limitations were evident in 13 included articles. The evidence reviewed suggests that dancing is enjoyable and can improve balance, motor function, and QoL. Further research is needed to determine the effect of dancing on cognition and depression in this population. Longer term dance interventions may be needed to achieve more meaningful benefits in mobility.

Conclusion: Dancing can be a feasible and beneficial physical activity and improve the wellness of individuals with PD.

Keywords: Parkinson's disease, dance, physical activity

ORIGINAL RESEARCH

Dancing for Parkinson Disease: A Randomized Trial of Irish Set Dancing Compared With Usual Care

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Abstract

Objective: To examine the feasibility of a randomized controlled study design and to explore the benefits of a set dancing intervention compared with usual care.

Design: Randomized controlled design, with participants randomized to Irish set dance classes or a usual care group.

Setting: Community based.

Participants: Individuals with idiopathic Parkinson disease (PD) (N = 90).

Interventions: The dance group attended a 1.5-hour dancing class each week for 10 weeks and undertook a home dance program for 20 minutes, 3 times per week. The usual care group continued with their usual care and daily activities.

Main Outcome Measures: The primary outcome was feasibility, determined by recruitment rates, success of randomization and allocation procedures, attrition, adherence, safety, willingness of participants to be randomized, resource availability, and cost. Secondary outcomes were motor function (motor section of the Unified Parkinson's Disease Rating Scale), quality of life (Parkinson's Disease Questionnaire-39), functional endurance (6-min walk test), and balance (mini-BESTest).

Results: Ninety participants were randomized (45 per group). There were no adverse effects or resource constraints. Although adherence to the dancing program was 93.5%, there was >40% attrition in each group. Postintervention, the dance group had greater nonsignificant gains in quality of life than the usual care group. There was a meaningful deterioration in endurance in the usual care group. There were no meaningful changes in other outcomes. The exit questionnaire showed participants enjoyed the classes and would like to continue participation.

Conclusions: For people with mild to moderately severe PD, set dancing is feasible and enjoyable and may improve quality of life.

Archives of Physical Medicine and Rehabilitation 2017;■:■■■-■■■

Complementary Therapies in Medicine 27 (2016) 12–17

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Complementary Therapies in Medicine

journal homepage: www.elsevierhealth.com/journals/ctim

Irish set dancing classes for people with Parkinson's disease: The needs of participants and dance teachers

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Precursor work by the research team to inform this project

Available online at www.sciencedirect.com

Public Health

journal homepage: www.elsevier.com/puhe

Original Research

To dance or not to dance? A comparison of balance, physical fitness and quality of life in older Irish set dancers and age-matched controls

J. Shanahan [a,*], L. Coman [a], F. Ryan [a], J. Saunders [b], K. O'Sullivan [a], O. Ni Bhriain [c], A.M. Clifford [a]

journal homepage: www.elsevier.com/locate/ctcp

Social dance for health and wellbeing in later life☆

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1. Introduction

Participating in physical activity can improve health and well-being in later life [1]. Unfortunately, physical activity levels decline significantly between the ages of 20 to 90 years [2]. In Ireland, less than a third of adults over 50 years are sufficiently active [3] and the oldest of old are predisposed to greater sedentary behaviour [4]. This pattern is

home Irish dance programme has only been explored in thos Parkinson's disease [17]. Home programmes can target phys activity and sedentary behaviour by increasing the volume of exercise and by eliminating travel issues getting to and from classes. Therefore, as a pre-requisite to a larger trial, the aim feasibility pilot study is to:

journal homepage: www.elsevier.com/locate/ctim

Insights from an early-stage development mixed methods study on arts-based interventions for older adults following hospitalisation

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ARTICLE INFO

Keywords:
Dance
Music
Deconditioning
Hospital
Older adults

ABSTRACT

Background: A period of hospitalisation can have negative consequences on physical function and autono older adults, including functional decline, dependency and reduced quality of life. Older adults favour a that focuses on social connectedness, fun and achievable skills.
Objective: The primary aim of this early-stage development mixed methods study was to determine the fea and acceptability of a randomised crossover trial design and two arts-based interventions tailored for older recently discharged from hospital.
Materials and methods: Community-dwelling adults, aged 65 years and older, who reported reduced mobil

Background

- Ireland has an ageing population (CSO, 2022).
- Many older adults in Ireland have a chronic condition, low levels of physical activity and experience loneliness and social isolation (Kenny et al., 2020).
- Approximately a third of adults over 65 years of age fall each year (Salari et al., 2022).
- The unprecedented consequences of the coronavirus (COVID-19) pandemic, lead to cocooning measures, non-essential contact and social distancing measures, all impacting on physical activity levels, deconditioning and social isolation (Dahlberg, 2021; Krendl & Perry, 2021; Robb et al., 2020).

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Community based arts interventions

Community-based activities can facilitate ease of participation for older people (Sarriot & Shaar, 2020).

A lack of community-based activities for older people that are tailored, fun, support social connectedness and provide achievable physical benefits, that impact on health and wellbeing.

Evidence based intervention including co-development to promote choice (Leask et al., 2017)

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Why Music and Dance?

Dance is both an art and a form of exercise, which has been shown to promote wellbeing, reduce social isolation and can improve improve physical health with positive effects on strength, endurance, functional fitness (Clifford et al., 2022; McQuade & O'Sullivan, 2021).

Musical activities have an important role in emotion, communication and social interaction in aging. Listening and singing to music have been associated with better emotional well-being, competence and reduction in social isolation (Sheppard & Broughton, 2020; Fancourt & Finn, 2019).

Music and Movement for Health

- To assess the feasibility of Music and Movement for Health programme for older adults living in the community.
- Promote ownership and involvement in community-based activities that aim to promote health and wellbeing.
- To obtain preliminary data on the effect of the Music and Movement for Health intervention

STUDY DESIGN

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Cluster randomised controlled trial, each cluster was randomised to intervention or control

All had the assessments at the baseline (start) and 12 weeks later (follow-up)

Groups either participated in 12-week music and movement programme between the two assessments (intervention group) or after follow-up for 6 weeks (control group)

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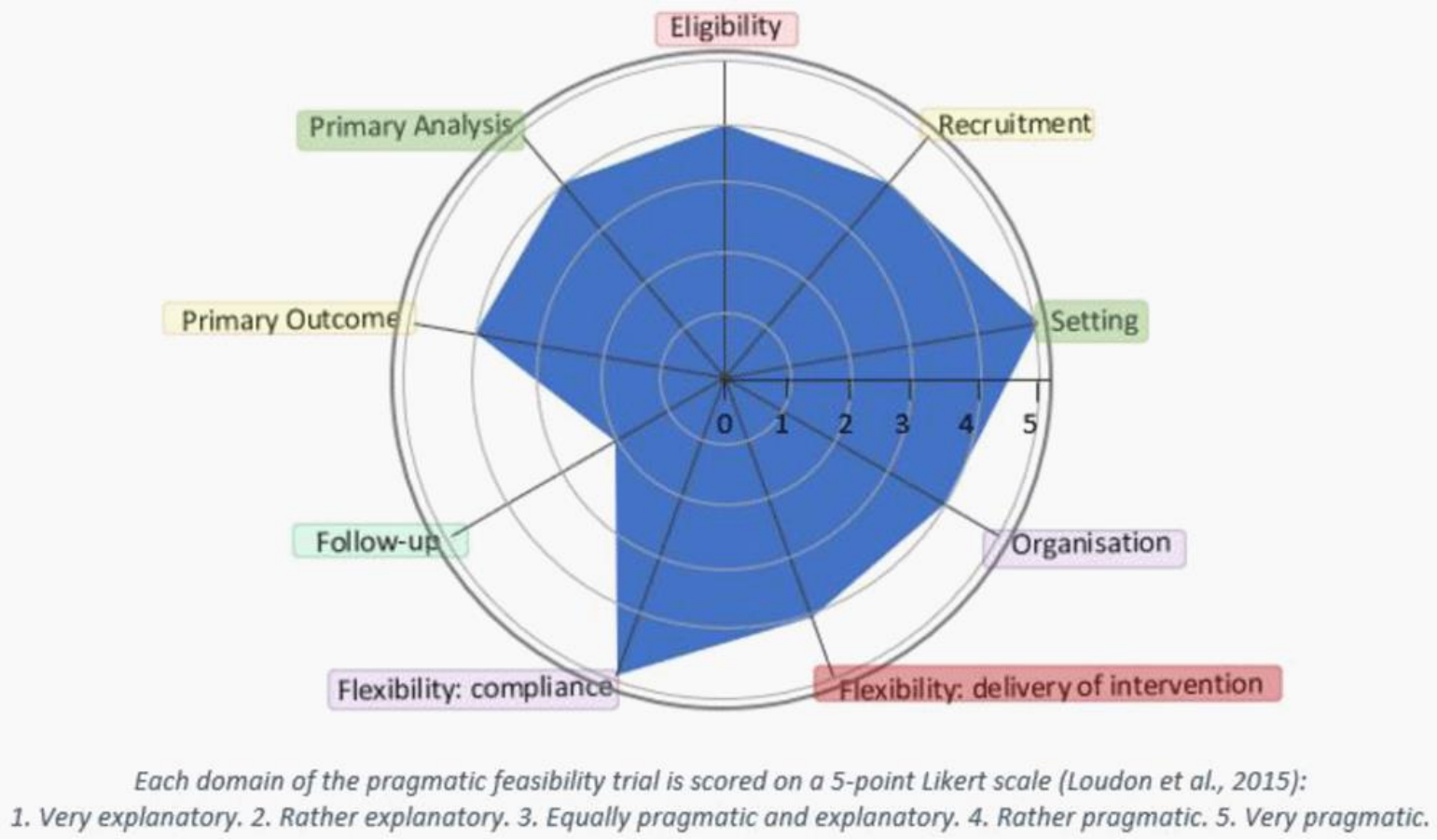
A Pragmatic Approach



Each domain of the pragmatic feasibility trial is scored on a 5-point Likert scale (Loudon et al., 2015):
1. Very explanatory. 2. Rather explanatory. 3. Equally pragmatic and explanatory. 4. Rather pragmatic. 5. Very pragmatic.

Loudon K, Treweek S, Sullivan F, et al.: The PRECIS-2 tool: designing trials that are fit for purpose. *BMJ.* 2015;350:h2147. 25956159 10.1136/bmj.h2147

Work Package One and Two

- WP1: Eligibility Criteria and Recruitment Pathway Refinement - aimed to define, identify and recruit a real-world inclusive population eligible for participation in the trial.
- WP2: Stakeholder Informed Intervention Refinement - aimed to co-create a safe, acceptable and accessible arts-based intervention for older adults incorporating research evidence, practice expertise and participant involvement
- Methods: Transparent Expert Consultation (TEC) Workshops
- EHS Ethics Approval Number: 2021_09_12_EHS)

Eligibility Criteria

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Inclusion

- 65 years or more.
- Community-dwelling.
- Able to walk three meters with or without an assistive device.
- Have a basic level of English literacy or an identified person who can translate English to their first language.
- Be able to hear and follow instructions.

Exclusion

- Unable to provide informed consent.
- Have had an acute stroke or any other unstable neurological diagnosis, have any uncontrolled cardiac or respiratory condition (or are on oxygen therapy).
- Do not satisfy the requirements of the Physical Activity Readiness Questionnaire (PARQ).

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PARQ

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Physical Activity readiness Questionnaire (PAR-Q)

The PAR-Q has been identified as a sensible first step to take if you are planning to increase the amount of physical activity in your life. To ensure it is safe for you to take part in the assessment and the programme, you will be asked to complete and sign the following questionnaire upon your arrival at the centre on the assessment day.

Please read each question carefully and answer every question honestly (Tick the appropriate answer)

Q1. Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by your doctor?

☐ No ☐ Yes

Q2. Do you feel pain in your chest when you do physical activity?

☐ No ☐ Yes

Q3. In the past month, have you had chest pain when you were not doing physical activity?

☐ No ☐ Yes

Q4. Do you lose your balance because of dizziness, or do you ever lose consciousness?

☐ No ☐ Yes

Q5. Do you have a bone or joint problem (e.g.: back, knee, or hip) that could be made worse by a change in your physical activity?

☐ No ☐ Yes

Q6. Is your doctor currently prescribing drugs for your blood pressure or heart condition? (E.g. Tablets, inhaler)

☐ No ☐ Yes

Q7. Do you know of any other reasons why you should not undergo physical activity?

☐ No ☐ Yes

If you have any concerns or answered yes to any of the above questions, please talk to your GP before taking part in the *Music and Movement for Health programme* to ensure you are medically safe to participate in a programme that includes exercise.

☐ I have read, understood, and completed the questionnaire.
☐ I answered ***NO*** to all questions.
☐ I answered ***YES*** to one or more of the above questions, and I have talked to my GP and deemed medically safe to undertake this programme.

Volunteer Signature: _____Date: _____

Name in Block Capitals: _____

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Recruitment Pathways

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- Social prescription from gatekeepers in health and social care services (e.g., public health nurses, GPs and community physiotherapists).
- Adverts placed in several community areas including local pharmacies and through relevant organisations (church bulletins, local GAA clubs).
- Linking with volunteer organisations, primary care centres and community centres (establishing local relationships with community-based 'champions' for the programme).
- Older adults will be able to self-refer or consent to be referred to the study by a gatekeeper.
- PPIs, meals on wheels, local radio, local newspapers, Alone, carers, farmers marts.
- Word of mouth vis-à-vis the use of social media.

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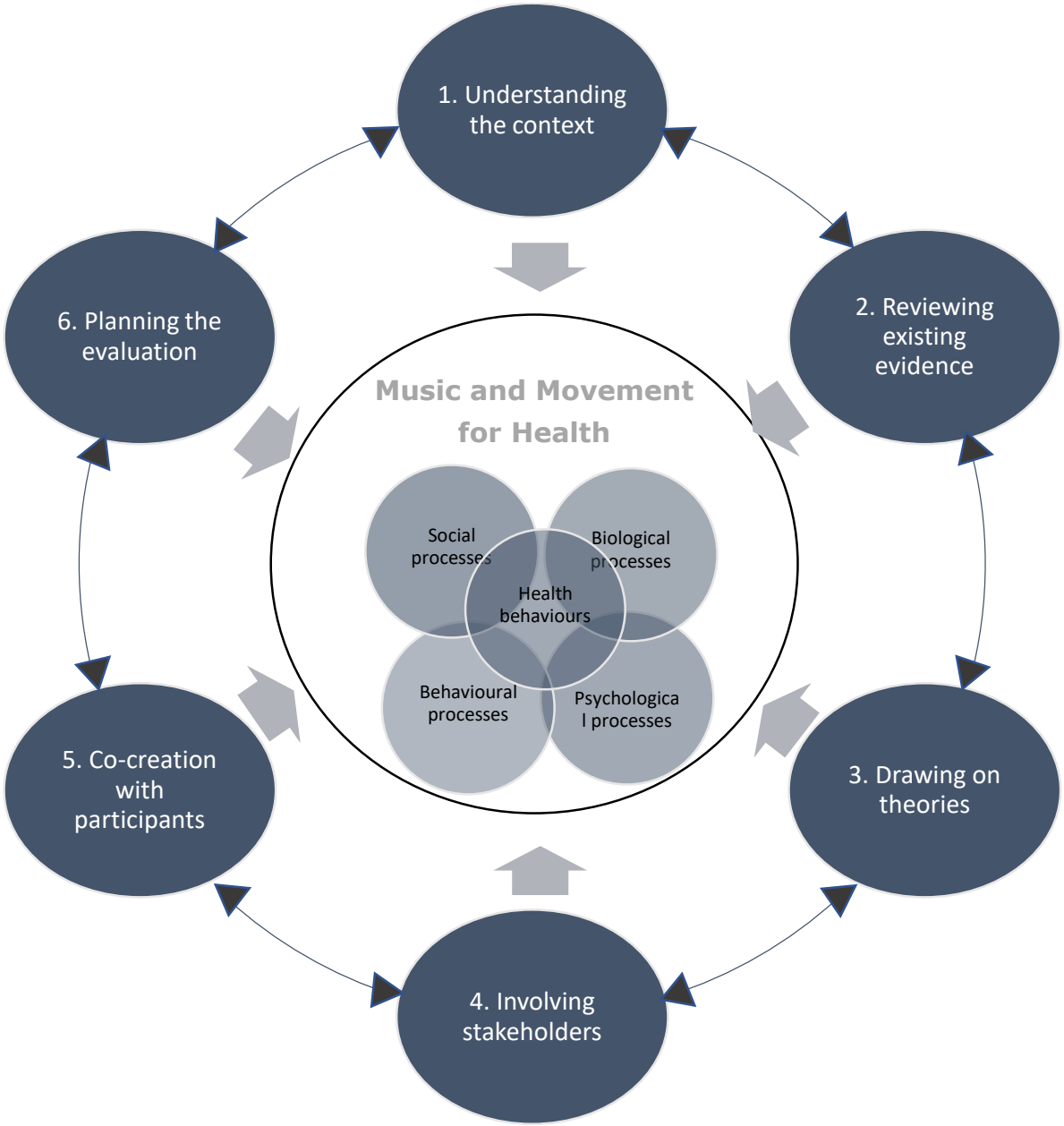
Recruitment



Intervention Development (Frameworks)

- Medical Research Council (MRC) framework for complex intervention

  Kathryn Skivington et al. BMJ 2021;374:bmj.n2061

- Multi-level Leisure Mechanisms Framework
  - Social, biological, behavioural, psychological processes and health behaviour

  Fancourt et al Lancet Psychiatry. 2021 Apr;8(4):329-339

Intervention Development

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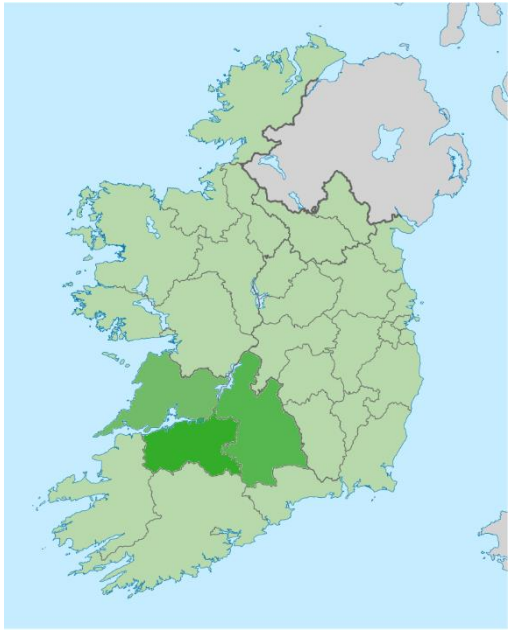
1. Understanding the context
2. Reviewing existing evidence
3. Drawing on theories
4. Involving stakeholders
5. Co-creation with participants

PPI Ignite UL@



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Research Evidence

ARTS & HEALTH
https://doi.org/10.1080/17533015.2022.2093929

Taylor & Francis
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OPEN ACCESS Check for updates

The effect of dance on physical health and cognition in community dwelling older adults: a systematic review and meta-analysis

Amanda M. Clifford[a], Joanne Shanahan[b], Jennifer McKee[c], Triona Cleary[d], Aoife O'Neill[a], Marie O'Gorman[b], Quinette Low[c] and Orfhlaith Ní Bhriain[d]

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ABSTRACT

Background: Dancing is an attractive form of exercise among older adults and may positively influence physical and psychosocial health. The aim of this systematic review was to synthesize the evidence examining the dance prescription and effectiveness of dance in community dwelling older adults.

Methods: Eight databases were searched to identify randomized controlled trials that evaluated the effectiveness of dance programs on community-dwelling older adults from 2007 to December 2020. Data regarding participants, dance programs and outcomes of interest were extracted and narratively synthesized. A meta-analysis was performed on the outcome data where possible.

Results: Twenty-two studies met the inclusion criteria, of those 15 were deemed to be fair quality and 7 high quality using the PEDro scale. Nineteen studies included in the meta-analysis found that dancing can improve mobility and endurance compared to no intervention and afforded equivalent outcomes compared to other exercise programs.

Conclusion: The findings suggest that dance is an effective, safe and viable activity for community-dwelling older adults..

ARTICLE HISTORY
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KEYWORDS
Dance; community dwelling; older adults; health; wellbeing

Nordic Journal of Music Therapy

Nordic Journal of Music Therapy

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rnjm20

Routledge
Taylor & Francis Group

Together in song: Designing a singing for health group intervention for older people living in the community

Hilary Moss, Sophie Lee, Amanda M. Clifford, Orfhlaith Ní Bhriain & Desmond O'Neill

Elements to Consider

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- **Preference:** select music and dance genres according to the preferences of the participants, Oh, Pretty Woman - YouTube, Kilfenora Céilí Band play reels: Traditional Irish Music from LiveTrad.com – YouTube, Strauss II - Greatest Waltzes Collection – YouTube, The Dubliners - The Marino Waltz (Featuring John Sheahan) - YouTube
- **Music genre**: musical accompaniment: consider the beat, tempo, and rhythm.
- Dance genre: Social dancing, Set dancing, Tango, Ballroom, Contemporary, and Ballet
- **Consider movements** that focus on what the intervention is designed to effect
  - for example, increasing stride length, gait velocity, balance, and functional mobility
- Integration of visual and proprioceptive external cues
- **Dance partners**: Partnered dance provides support and tactile feedback. Dancing solo may be more difficult initially, but may result in improved independent walking and balance when appropriate

The Intervention

- 12-week, one 90-minute session per week
- Location: Ease of access, refreshments, parking, toilet facilities, community friendly
- Facilitators: Music therapist, dance teacher, physiotherapist
- All sessions had an adaptable level of difficulty: gentle, moderate, more intense
- Home programme

Morning 11.30am or

Early afternoon 1:30/2pm

Home programme

3 x 20 min/week

OUTCOME MEASURES

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Primary outcomes (Feasibility)

- Recruitment rates
- Refusal Rates (reasons for refusal)
- Retention
- Attendance at supervised sessions (minimum 65%)
- Participation in home exercise programme
- Safety (Falls log/diary)

Secondary outcomes measure

- Physical performance measures (TUG, TUG-Cognitive, SPPB, 30s Chair Stand Test, Single Leg Stance Test)
- Self-Report Physical Activity (IPEQ)
- Cognition (TMT)
- Loneliness (UCLA loneliness scale,)
- Social Isolation (Berkman-Syme SNI)
- Quality of life and wellbeing (EQ-5D-5L, ICECAP-O)
- Mood (Geriatric Depression Scale 5-items)

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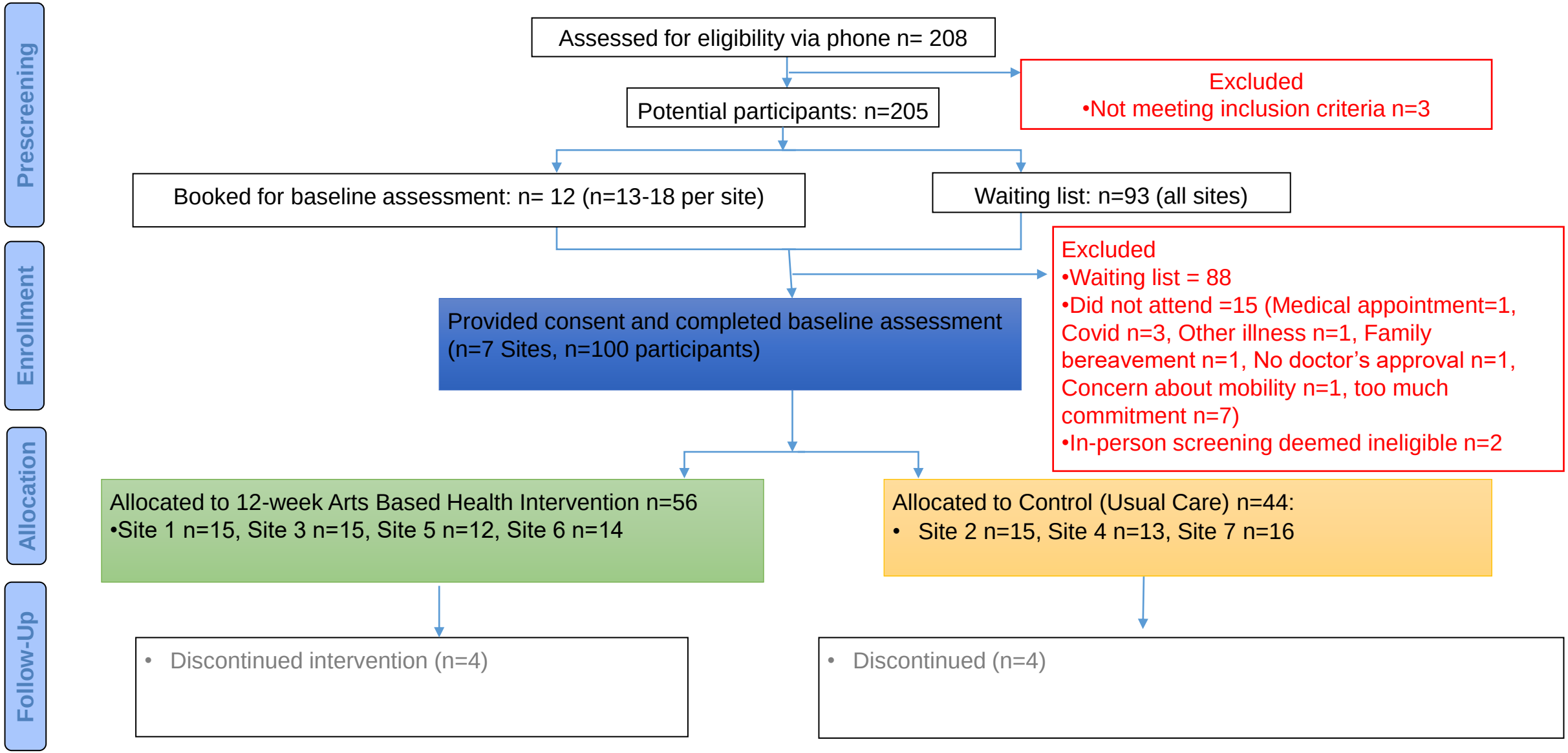
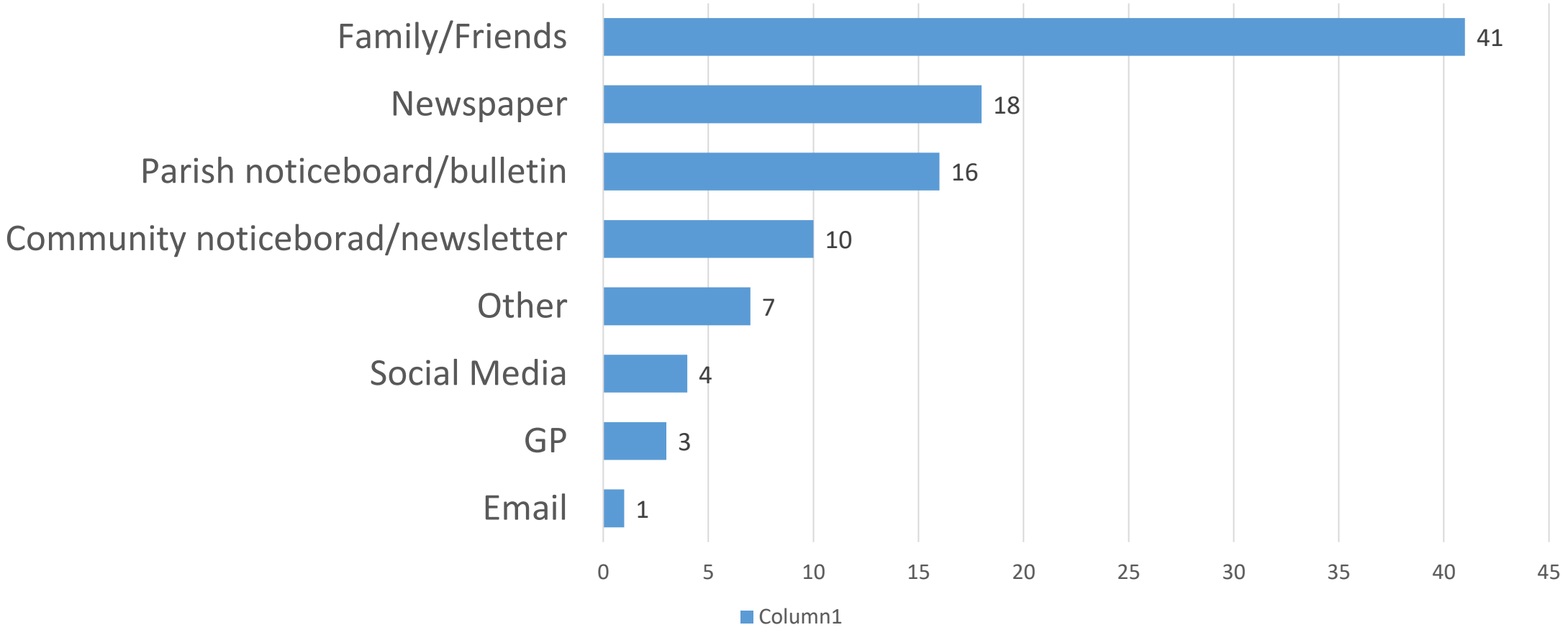
CONSORT 2010 Flow Diagram Movement and Music for Health



Recruitment pathway of participants (n=100)



Plans

- Analyse data from the **focus groups and interviews** with participants and stakeholders
- Secondary outcome measure data analysis, preliminary evidence of **effect**
- **Economic analysis and cost effectiveness**

More information and future updates

- Study Registration

[ISRCTN - ISRCTN35313497: Music and Movement for Health: a feasibility trial of a music and dance programme for the health and wellbeing of community-based older adults]

- Study Protocol

[Music and Movement for Health: Protocol for a... | HRB Open Research]

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- Prof. Desmond O'Neill , Tallaght Hospital and Trinity College Dublin
- Dr Rosemary J. Gowran, SAH, University of Limerick
- Dr Ali Sheikhi (HRI, University of Limerick)
- Dr Jonathan Salsberg (PPI, University of Limerick)
- Prof. Liam Glynn (GEMS, University of Limerick)
- Dr Hilary Moss (IWAMD, University of Limerick)
- Prof. Lehana Thebane, McMaster University, Canada
- Dr Brendan Kennelly , Health Economist, NUIG
- Ms Catherine Maher (Physiotherapist, Health Service Executive)
- ALONE (National organisation supporting and empowering older people)
- Prof. Quinette Louw Stellenbosch University, South Africa
- Dr Joanne Shanahan
- Prof Meg Morris, La Trobe University, Melbourne
- Prof Daniele Volpe , Italy
- PPI panel

MUSIC AND MOVEMENT FOR HEALTH

Kilfenora Céilí Band play reels: Traditional Irish Music from LiveTrad.com - Bing video

André Rieu - The Beautiful Blue Danube (official video) - Bing video

Singing for better lung health in chronic respiratory disease

Róisín Cahalan

University of Limerick, Physical Activity for Health Research Cluster

Introduction

- Background
- Intervention: Who & how
- Our partners
- Moving online
- What we offer

The science

- Targets biopsychosocial problems and challenges of chronic disease – co-morbid mental health issues and participation.
- Utilisation of cardiorespiratory system during persistent singing training, resulting in enhanced respiratory muscles and an optimized breathing mode.
- Singing -> changes in neurotransmitters and hormones, including the upregulation of oxytocin, immunoglobulin A, and endorphins, which improves immune function and increases feelings of happiness (Kang et al, 2018).
- Physiological changes equivalent to a brisk walk (oxygen consumption, heart rate, and volume per breath above those seen walking at 4km/hr).

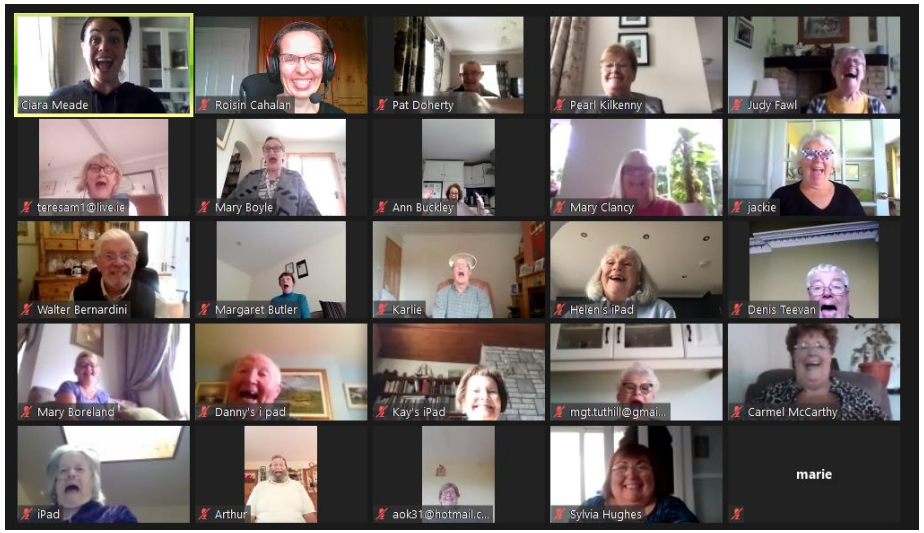
The evidence

- Quantitative data suggest that singing has the potential to improve health-related quality of life, particularly related to physical health, and levels of anxiety without causing significant side effects (SLH; Lewis et al, 2016, Lord et al, 2010).
- ”Improved exercise capacity and a reduction in anxiety” McNaughton, 2016, Sing your lungs out, NZ.
- Annual cost of a weekly singing class was a mere $NZ4000 (€4400)
- A pilot investigation of quality of life and lung function following choral singing in cancer survivors and their carers (Gale et al, 2012): Improve QoL and depression, despite no physiological change in cancer survivors and their carers

The process

SingStrong

Over to you Ciara for a demo: https://www.youtube.com/watch?v=ej7qLm4z7MM



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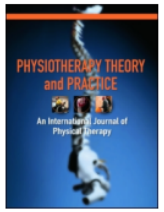
Our research

SingStrong



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"SingStrong": Singing for better lung health in COPD – A pilot study

Roisin Cahalan, James Green, Ciara Meade & Anne Griffin

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SingStrong – singing for better lung health in pulmonary fibrosis: A feasibility study

Roisin Cahalan[a,b,*], Anne Marie Russell[c], Ciara Meade[d] and Grainne Hayes[b,e,1]

RESEARCH ARTICLE

SingStrong—A singing and breathing retraining intervention for respiratory and other common symptoms of long COVID: A pilot study

Roisin M. Cahalan, PhD, MA, BSc[1,2], Ciara Meade, MA[3], Sarah Mockler[2,4]

RM Cahalan, C Meade, S Mockler. SingStrong: SingStrong—A singing and breathing retraining intervention for respiratory and other common symptoms of long COVID: A pilot study. Can J Respir Ther 2022;58:20–27. doi: 10.29390/cjrt-2021-074.

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Findings - COPD

Results: Fifty-eight (74%) participants who attended at least 4/8 session were re-tested. There was a statistically significant improvement in 6MWT (p = .02), non-significant improvements in CAT (p = .24) and HADS Depression (p = .238), and non-significant worsening in HADS Anxiety (p = .34). All qualitative feedback was positive, including improvements in breathing, quality of life and intervention enjoyment.

Table 3. Spirometry pre and post-intervention disease classification including net change.

	Pre-intervention n (%)	Post-intervention n (%)	Change ±: n (%)
Obstructive	**25 (56.9%)**	**23 (52.3%)**	**−2 (−4.5%)**
Mild	9 (20.5%)	3 (6.8%)	−6 (−13.7%)
Moderate	9 (20.5%)	13 (29.5%)	+4 (+9%)
Severe	7 (15.9%)	7 (15.9%)	No change
Restrictive	**6 (13.6%)**	**4 (9.1%)**	**−2 (−4.5%)**
Mild	4 (9.0%)	1 (2.3%)	−3 (−6.7%)
Moderate	1 (2.3%)	2 (4.5%)	+1 (+2.2%)
Severe	1 (2.3%)	1 (2.3%)	No change
Normal	**13 (29.5%)**	**17 (38.6%)**	**+4 (+9.1%)**
Total	**44 (100%)**	**44(100%)**	

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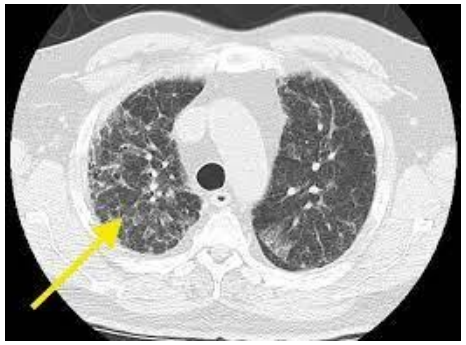
Findings - ILF



- St Georges Respiratory questionnaire – disease impact: Small but clinically non-significant improvement
- ILF-specific questionnaire - breathlessness & disease impact: Significant improvement in outcomes after the SingStrong programme
- Participants also separately reported small improvements in how they felt generally, and in the urgency of coughing post intervention.
- Scale of 1 to 5 (5 = best score), participants reported the average effectiveness of the SingStrong programme in helping the management of disease at 3.7/5 and programme enjoyment at 4.7/5.
- 14/15 participants -happy to engage in another session of SingStrong if available.

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Findings: Long Covid

Outcome Measures

- Demographic and COVID-19 data (hospitalisation status, duration & treatments).
- DePaul Symptom Questionnaire Short Form (DSQ- SF)
- COVID 19 Yorkshire Rehab Screen (C19-YRS) Questionnaire.
- Post-intervention focus groups (n=8)

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Results

- Participants showed **significant pre-post intervention improvements** in all breathlessness symptoms (at rest: p< .001; dressing: p=0.01; stairs: p< .001), fatigue (p=0.03), usual activities (p=0.04).
- Statistically significant improvements also in pain/disability (p=0.03), voice quality (p=0.01), and communication/cognition (p=0.04).
- Pre-post number of instances meeting DSQ-SF criteria for ME and CFS decreased by a net of nine cases (14.3%).
- No association between COVID-19 hospitalisation status and diagnosis of ME/CFS was identified.
- Qualitative feedback from eight participants was overwhelmingly positive with all reporting improvements in breathing and general wellbeing.

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Participant feedback

SingStrong

“Found it helped breathing to a great extent and enjoyed the classes.”

“I feel better in myself and really enjoyed it.”

“ It helped me physically and mentally and I learned a lot.”

”The breathing exercises very helpful with our own exercise programme”

“It's had a really positive impact on my wellbeing... I get a lot more out of my day, I'm able to pace myself better. I'm able to keep my heart rate down, a huge change from being stuck in bed for 23 hours a day”.

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Limitations

- Cohort sizes
- Limited assessment parameters
- Participant bias
- Lack long term follow up

- Funding!

Where to from here…

- Training of online facilitators
- Community network
- Research priorities
- In person event
- New partners

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Get involved

Thank you to i-PARC

Questions?

Contact me at: Roisin.Cahalan@ul.ie