

ILD –IN Annual  
Conference  
Birmingham  
2023



UNIVERSITY OF  
**LIMERICK**  
OLLSCOIL LUIMNIGH

*Singing Strong*

Singing for Better Lung Health

Ass. Prof Róisín Cahalan

8<sup>th</sup> October 2023



# Introductions and Background

**What is SingStrong?**

**How SingStrong came about**

**Small acorns**

**COVID times**

**Working with ILFA**



# Settings and sessions

SingStrong



# The science

*SingStrong*

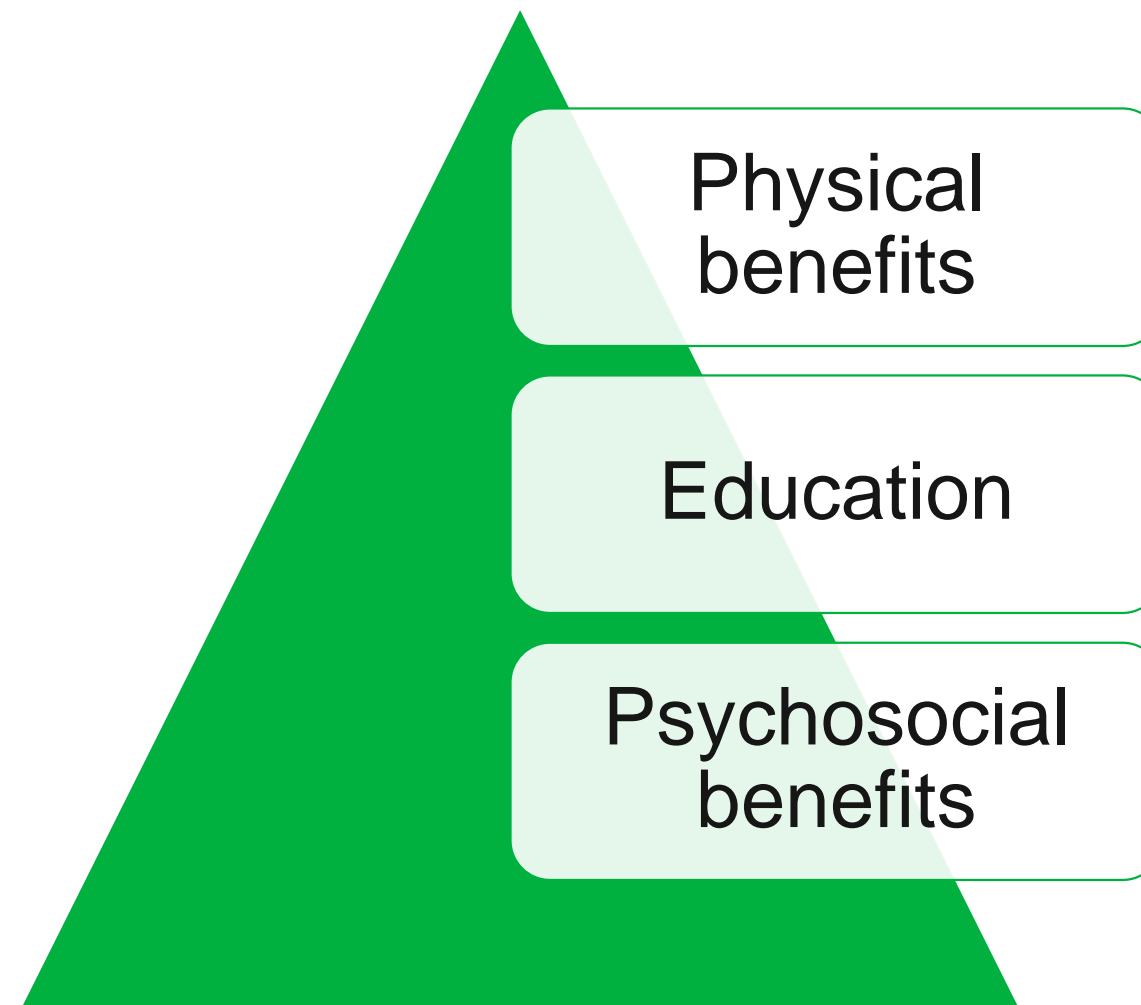
- Targets biopsychosocial problems and challenges of chronic disease – co-morbid **mental health issues** and participation.
- Utilisation of cardiorespiratory system during persistent singing training, resulting in **enhanced respiratory muscles and an optimized breathing mode**.
- Singing -> changes 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

SingStrong

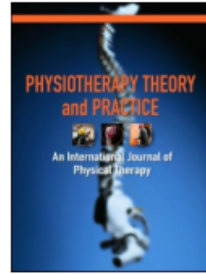
- Quantitative data suggest that singing has the potential to improve health-related **quality of life, particularly related to physical health, and levels of anxiety without causing significant side effects** (SLH; Lewis et al, 2016, Lord et al, 2010).
- "Improved **exercise capacity** and a **reduction 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 Trifecta



Exercise that doesn't feel like exercise is exercise that gets done 😊

# Who we work with – and where



Physiotherapy Theory and Practice  
An International Journal of Physical Therapy



ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/iptp20>

## “SingStrong”: Singing for better lung health in COPD – A pilot study

Roisin Cahalan, James Green, Ciara Meade & Anne Griffin

To cite this article: Roisin Cahalan, James Green, Ciara Meade & Anne Griffin (2021): “SingStrong”: Singing for better lung health in COPD – A pilot study, Physiotherapy Theory and Practice, DOI: [10.1080/09593985.2021.1907825](https://doi.org/10.1080/09593985.2021.1907825)

To link to this article: <https://doi.org/10.1080/09593985.2021.1907825>

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### RESEARCH ARTICLE

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## 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<sup>1,2</sup>, Ciara Meade, MA<sup>3</sup>, Sarah Mockler<sup>2,4</sup>

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](https://doi.org/10.29390/cjrt-2021-074).



Health Service Executive Cancer Services: SingStrong for Cancer



# What about lung fibrosis?

- Physiological differences, but LOTS of the same issues.
- Coughing and breathlessness more acute.
- Fear factor a little greater?
- ILFA experience.





# The Irish Context & beyond

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- An invisible population
- No patient register
- No clinical directorate at government level
- Excluded from services

And more broadly

- No set of core outcome standards ( in progress IPF)
- Internationally agreed best management approach

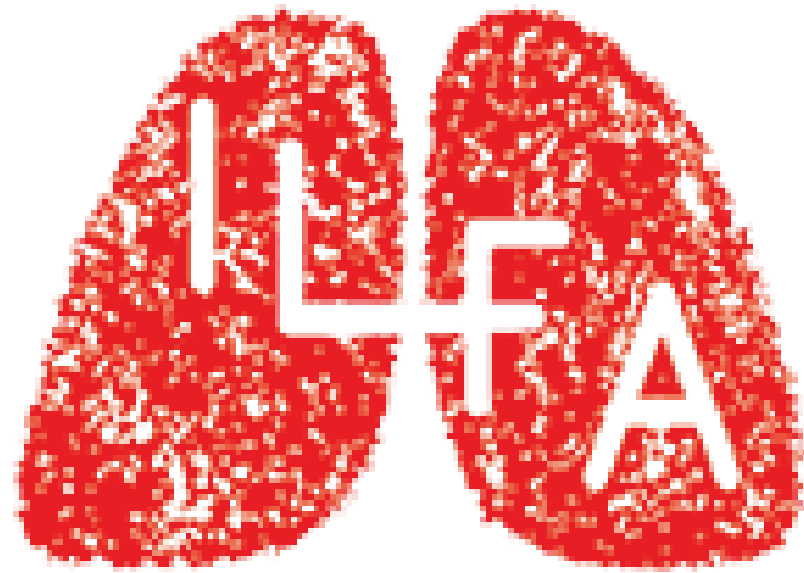


# Our Research in Lung Fibrosis

Physiotherapy Practice and Research 43 (2022) 17–25  
DOI:10.3233/PPR-210622  
IOS Press

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

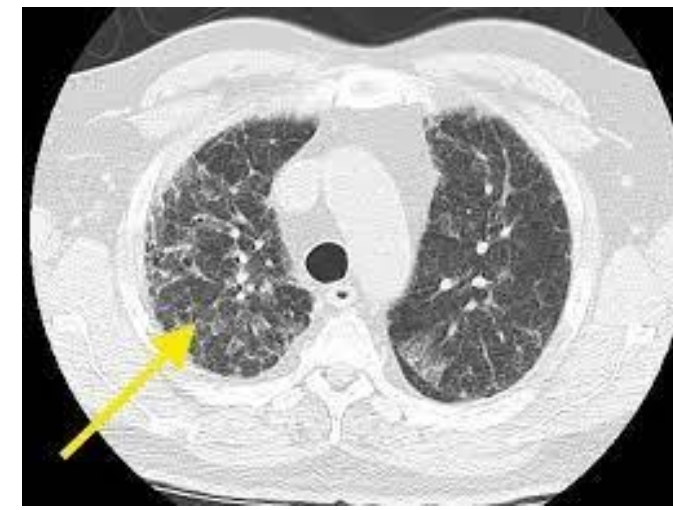
Roisin Cahalan<sup>a,b,\*</sup>, Anne Marie Russell<sup>c</sup>, Ciara Meade<sup>d</sup> and Grainne Hayes<sup>b,c,1</sup>



**Irish Lung  
Fibrosis  
Association**



# 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.

# So, what happens?

*SingStrong*

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



# Why Singing?



# A thank you to our sponsors

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**A HUGE THANK YOU  
TO THE ILD 😊**

**Questions?**

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