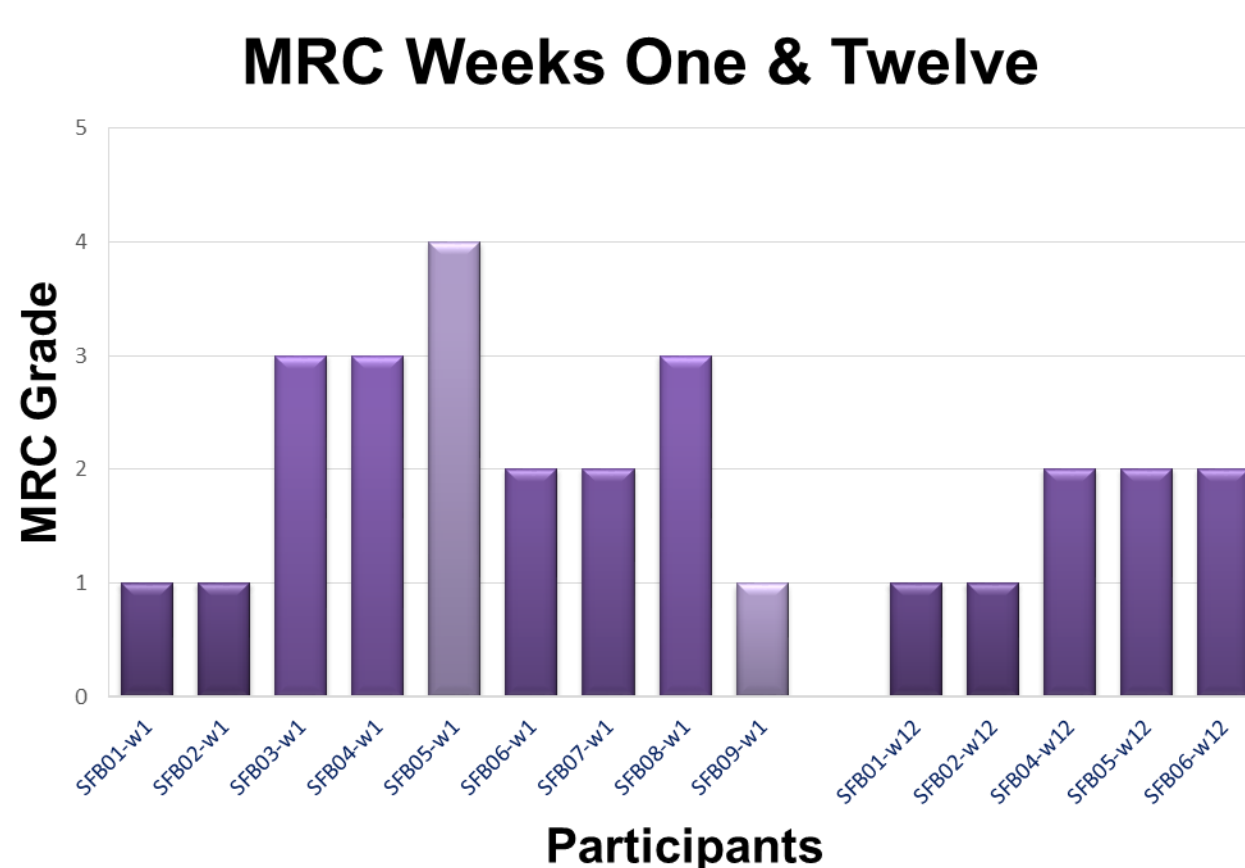




## INTRODUCTION

- Breathlessness is a distressing symptom for which treatments are limited
- Benefits of singing for lung health in COPD have been demonstrated<sup>1-3</sup>
- People diagnosed with IIP's often attend generic singing groups
- It is not known if a different approach is required for those with restrictive breathing patterns
- We set out to explore the usefulness of breathlessness management utilising singing techniques for breathing control, mindfulness and posture specifically in IIPs

## RESULTS

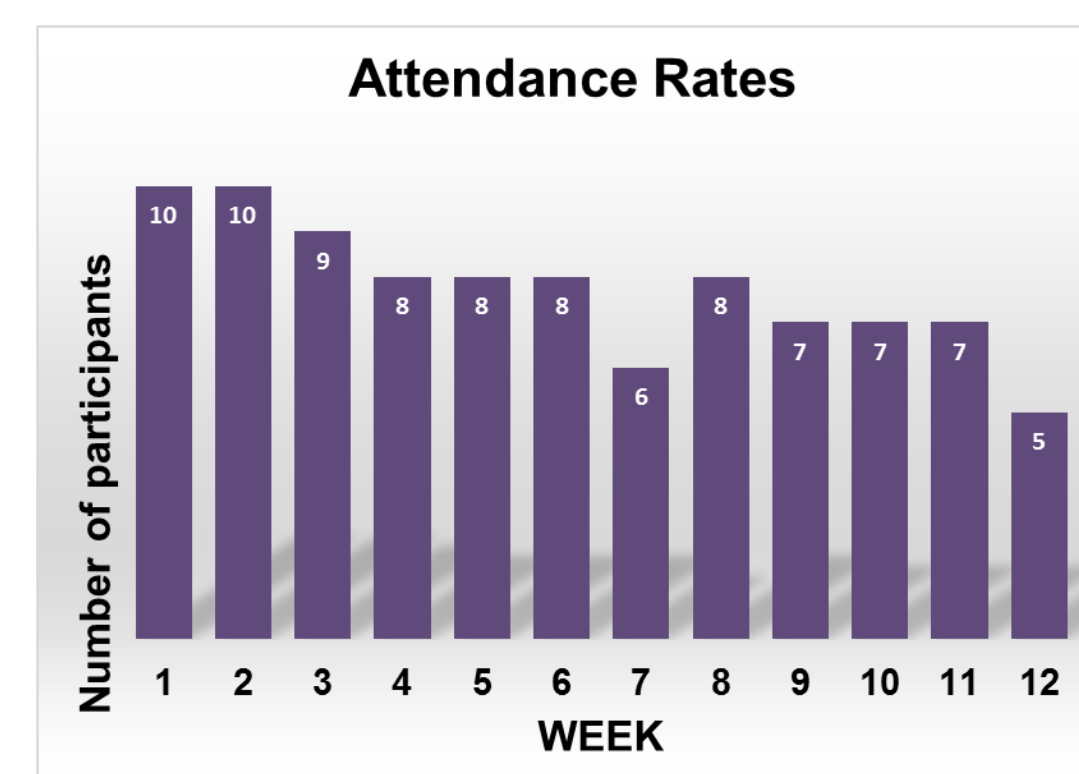
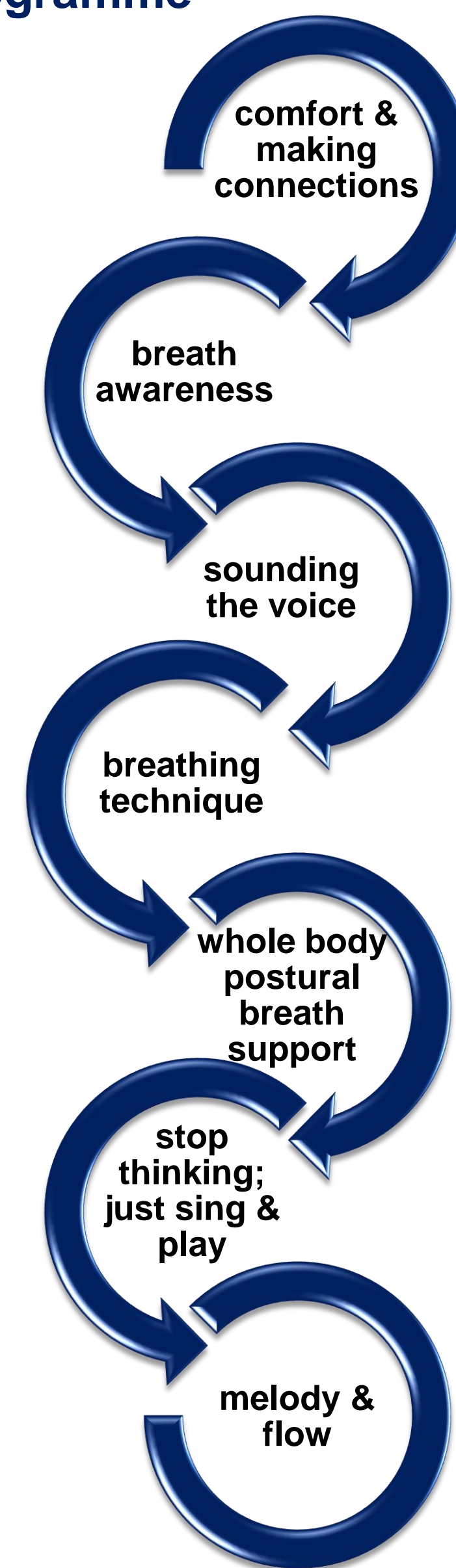


	Week 1 (n=10)	Week 12 (n=6)
PHQ9	5.33 ±3.84	3.80 ±3.19
GAD-7	2.11 ±2.42	1.60 ±1.67
ETV Distress	1.50 ±2.82	2.40 ±3.31
ETV Anxiety	2.17 ±3.24	2.70 ±3.51
ETV Depression	2.22 ±3.44	2.20 ±3.62
ETV Anger	1.50 ±2.14	2.20 ±3.21
ETV Need for Help	1.56 ±2.04	1.20 ±2.41
SGRQ Symptoms	54.15 ±23.23	48.60 ±26.83
SGRQ Activities	58.38 ±30.49	51.23 ±41.06
SGRQ Impacts	33.71 ±22.58	28.88 ±21.92
SGRQ Total	43.97 ±28.00	30.18 ±20.64

### Thematic analysis of Participant Diaries

Dimension	Quotation
Physical	My breathing has become regular and comfortable I realise how important posture is My own physical reactions to the exercises is improving Relaxation techniques help to improve my breathing
Psychological	The techniques I have learned helped carry me through a stressful week My attitude to how I breathe has changed Feeling fearful about the group coming to a close Emotional & mental stress gets put to one side - feeling refreshed & renewed again
Cognitive	I found the class this week more technical and very interesting We are so absorbed in doing what we are learning, the outside world and concerns disappear More progress with new songs that stretch technique and temp
Social functioning	I would not miss it – all my friends are there The camaraderie and friendship The best thing is doing the singing & getting to know other sufferers of this disease

Figure 1. Principles underpinning the Programme



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## METHODS

- The Rhythm & Song programme was written and delivered specifically for patients with IIP by an experienced Music Therapist
  - informed through prior knowledge & in discussion with UK based ILD specialists
- A clinical researcher with condition specific knowledge screened and recruited 10 patients (7:3 men:women) & participated in some sessions
- The programme was delivered in a tertiary centre. Patients were advised to defer any participation in Pulmonary Rehabilitation programmes
- Baseline spirometry was performed & repeated at week 12
- Participants completed the following questionnaires at baseline and week 12
  - SGRQ; PHQ-9; GAD-7; MRC Breathlessness scale; Emotional Thermometers Visual analogue Scale (ETV)
- An iterative\*\* approach was taken to the 12 week programme of “Rhythm and Song” underpinned by core principles Fig 1. This approach combined appropriate musical, movement and mindfulness activity
- Participants consented to audio visual recordings of the later session
- At the outset participants were asked to set personal aims and objectives
- Weekly diaries recording reflections on each workshop were maintained by participants and music therapist & underwent thematic analysis

AGE	FVC	FVC%
72 ± 8	2.62 ± 0.68	78.14 ± 14.02
DLC <sub>0</sub>	DLC <sub>0</sub> %	CPI
3.61 ± 1.72	45.31 ± 20.61	48.71 ± 16.64

Week 1 – Week 12	Mean Change	Effect Size
PHQ9	-0.6	-0.20
GAD-7	-0.4	-0.16
ETV Distress	-0.6	-0.21
ETV Anxiety	-0.5	-0.15
ETV Depression	-0.2	-0.21
ETV Anger	-0.6	-0.28
ETV Need for Help	0.30	0.14
SGRQ Symptoms	-2.87	-0.12
SGRQ Activities	-8.00	-0.02
SGRQ Impacts	0.04	0.00

### References:

- Lewis A, et al Singing for Lung Health—a systematic review of the literature and consensus statement npj Primary Care Respir Med 26: 16080 (2016) doi:10.1038/npjpcrm.2016.80
- Lord V.M et al. Singing teaching as a therapy for chronic respiratory disease-: A randomised controlled trial & qualitative evaluation. BMC Pulm. Med. 10, 41 (2010)
- Clift S et al Singing for Better Breathing Findings from the Lambeth and Southwark Singing and COPD Project Technical Report Sidney De Haan Research Centre for Arts and Health

## CONCLUSIONS

- Analysis of participant’s diaries indicate that the 12 week Rhythm and song programme was enjoyable, educational and improved perceptions of breath management
  - Social cohesion and shared experience were of particular importance
  - Participants recorded lower scores for depression, and the need for help at the end of the programme and an improvement in their overall quality of life.
  - Anxiety scores were conflicted according to GAD-7 and the ET-VAS
  - MRC grade remained the same for the majority
  - Questionnaire data should be interpreted with caution given the sample size.
  - There was no meaningful change in FVC as measured by spirometry from week 1 -12
  - The study provides a positive baseline for which to plan & continue future work but further discussion is needed to optimise a robust end point model.
  - This group ran through the autumn months which in retrospect was not the optimal time
  - Future groups should over recruit to allow absences due to holidays and exacerbation
- \*\* Our work demonstrated that people with restrictive lung conditions require different breathing training than those with obstructive lung conditions. These differences must be fully accounted for when providing singing interventions.

