

# The impact of exercise training and multi-disciplinary rehabilitation on attitudes and behaviours in Pulmonary Arterial Hypertension : a qualitative evaluation

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## Introduction

People with pulmonary arterial hypertension (PAH) have reduced exercise capacity and quality of life. They are often more sedentary than the general population, despite evidence of benefit of exercise based interventions.<sup>1</sup> However, the PAH consumer experience of exercise interventions is not well described.



## Aim

This study sought to understand the subjective experience and impact of an exercise walking program, and a multidisciplinary rehabilitation program on exercise attitudes and behaviour in patients with PAH.

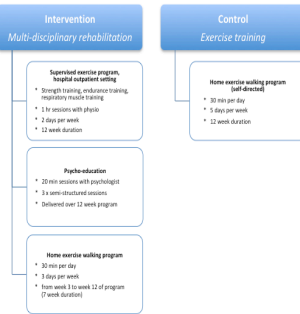
## Method

- This was an adjunct cohort study, conducted with participants who completed the ExPAH randomised controlled trial<sup>2</sup>
- The ExPAH RCT compared a home walking program (WP) to an outpatient multidisciplinary rehabilitation (MDR) program over 12 weeks (Figure 1).
- Here, qualitative, semi-structured interviews were conducted after completion of the ExPAH protocol.
- Interviews were comprised of 31 fixed and free text response fields
- Interviews were transcribed verbatim, and descriptive qualitative analyses were performed via an inductive thematic content approach (Nvivo software, version 12)



## The ExPAH study protocol (Fig 1)

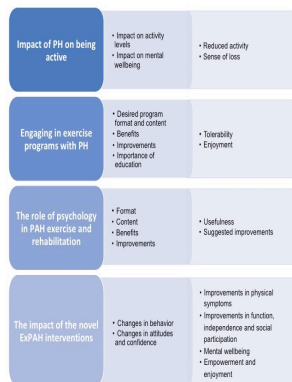
Participants were randomized to one of two groups. Interviews were conducted after the 12-week interventions were complete.



## Results

- 14 interviews were completed
- Four key themes related to exercise were identified from interviews (Fig. 2)
  - the impact of PH on being active
  - engaging in exercise programs
  - the role of psychology
  - the impact of the novel ExPAH interventions

**Figure 2: Key themes and subthemes arising from interviews**



## Results (cont.).

- We found that exercise had a substantial impact on exercise and quality of life
- Both the walking program and MDR program were well tolerated and enjoyable
- Both programs had positive impacts on:
  - exercise attitudes
  - confidence to exercise
  - physical activity
- Participants' suggested improvements for the walking program:
  - a more graduated start
  - regular contact, e.g. phone support
  - Psychology input if desired
- Participants' suggested improvements for the MDR program:
  - Psychology as optional (not compulsory)
  - Format of psychology input tailored to participant preference (e.g. individual counselling sessions)



## Conclusions

Outpatient exercise and multidisciplinary rehabilitation programs are beneficial in the management of PAH.

Our programs had a positive impact on participant attitudes and confidence to exercise, and on physical activity levels.

By interviewing participants who had undertaken the ExPAH protocol we were able to understand what elements were helpful for participants, as well as areas for improvement.

## References

- 1 Buys et al, BMC Pulm Med 2015; 15(1):40.
- 2 Chia et al, BMJ Open 2017; 7(2): e014037

## Acknowledgements

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