

Supplement 1

Outline of the intervention

Booklet	Content	Exercises
1 'Anxiety and PH'	<ul style="list-style-type: none"> • Introduction to CBT model • Introduction to the intervention • Normalise difficulties with anxiety through case studies • Psychoeducation on psychosocial impact of PH, anxiety (panic, fear, stress and worry) and anxiety in PH • Highlight the importance of coping strategies 	<ul style="list-style-type: none"> • Explore and identify common symptoms of anxiety • Complete the four-areas model – develop a mini-formulation of difficulties • Slow breathing exercise
2 'What keeps anxiety going'	<ul style="list-style-type: none"> • Psychoeducation on anxiety – focusing on avoidance, reassurance seeking, safety behaviours, symptoms and unhelpful thoughts about health – all specific to experiences of PH 	<ul style="list-style-type: none"> • Explore and recognise maintenance cycles • Develop a here and now formulation of difficulties recognising triggers, reactions, unhelpful coping strategies and short- and long-term consequences • Two mindfulness exercises – focusing on bodily symptoms and everyday events
3 'The power of thoughts'	<ul style="list-style-type: none"> • Psychoeducation on cognitive biases grounded in the four-factor model: predicting the future, mind reading, over-generalisation, all-or-nothing thinking and self-criticism • Challenging unhelpful thoughts – evidence for and against • Normalise difficulties with anxiety through case studies • Develop techniques to help manage worry 	<ul style="list-style-type: none"> • Recognise unhelpful thinking biases • Thought challenging • Worry tree • Worry delay • Thought monitoring exercise
4 'The power	<ul style="list-style-type: none"> • Psychoeducation on graded exposure to manage anxiety; pacing, and boom and bust cycle to manage pain and fatigue 	<ul style="list-style-type: none"> • Development of anxiety hierarchy • Development of pacing hierarchy

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- Psychoeducation on other factors affecting anxiety: routine, diet, sleep, social support, keeping physically active and confidence/assurance
- Relapse prevention reviewing what participants have learnt, skills they have developed, and identifying and managing setbacks
- Signpost to other services for mental health and PH-related problems

- Create a plan to cope with setbacks
 - Progressive muscle relaxation exercise
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CBT = Cognitive Behavioural Therapy; PH = Pulmonary Hypertension