Poster 85

A Longitudinal Assessment of Mindfulness for Health as a Support for the Chronic Pain Population

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INTRODUCTION

Mindfulness is a practice of attentional training recommended to improve wellbeing in chronic pain patients.

The Breathworks 8-week Mindfulness for Health (MfH) course was developed using personal experience of pain to meet the needs of patients with chronic health conditions.

We investigated treatment outcomes, including changes in **quality of life**, **distress** and **pain catastrophising**, immediately after treatment and **sustained over time**.

METHODS

Participants who took one of our MfH courses in 2016 were invited to complete online questionnaires pre-course, post-course and at 3- and 12-month follow-up. Those who had chronic pain also completed specific pain related questions.

Our final sample consisted of **53** participants (43 women, 10 men) who completed both pre- and post-treatment questionnaires, **33 of whom were experiencing chronic pain** (27 women, 5 men).

PROGRAMME OUTLINE

WEEK	THEME	KEY LEARNING POINTS
1	THE BREATHING BODY	• Introduction to mindfulness • Primary and secondary suffering • Awareness of body and breath
2	DWELLING IN THE BODY	• 'Doing' and 'Being' mode • Fluidity of life
3	MINDFULNESS OF MOVING AND LIVING	• The 'Boom and Bust' cycle • Pacing diaries and setting baselines • Locating 'hard and soft edges' of your pain
4	ACCEPTANCE AND SELF-COMPASSION	• Accepting rather than resisting • 'Blocking' and 'Drowning'
5	THE PLEASURE OF SMALL THINGS	• The 'Negativity Bias' • Pleasurable aspects of our experience
6	FINDING EQUANIMITY	• The three major emotion systems • 'Focused Awareness' and 'Open Monitoring' • Practicing loving kindness
7	TURNING OUTWARDS	• Discovering the connection between other living beings • Balanced effort
8	THE JOURNEY CONTINUES	• Resources for the journey ahead • Building a toolkit for life

RESULTS

To the right are graphs of pre- and post-course scores for emotional distress (HADS – a combined total for depression and anxiety) and pain catastrophising (PCS). Figures show individual participant changes: whether they improved, stayed the same or deteriorated. They also show whether the change was:

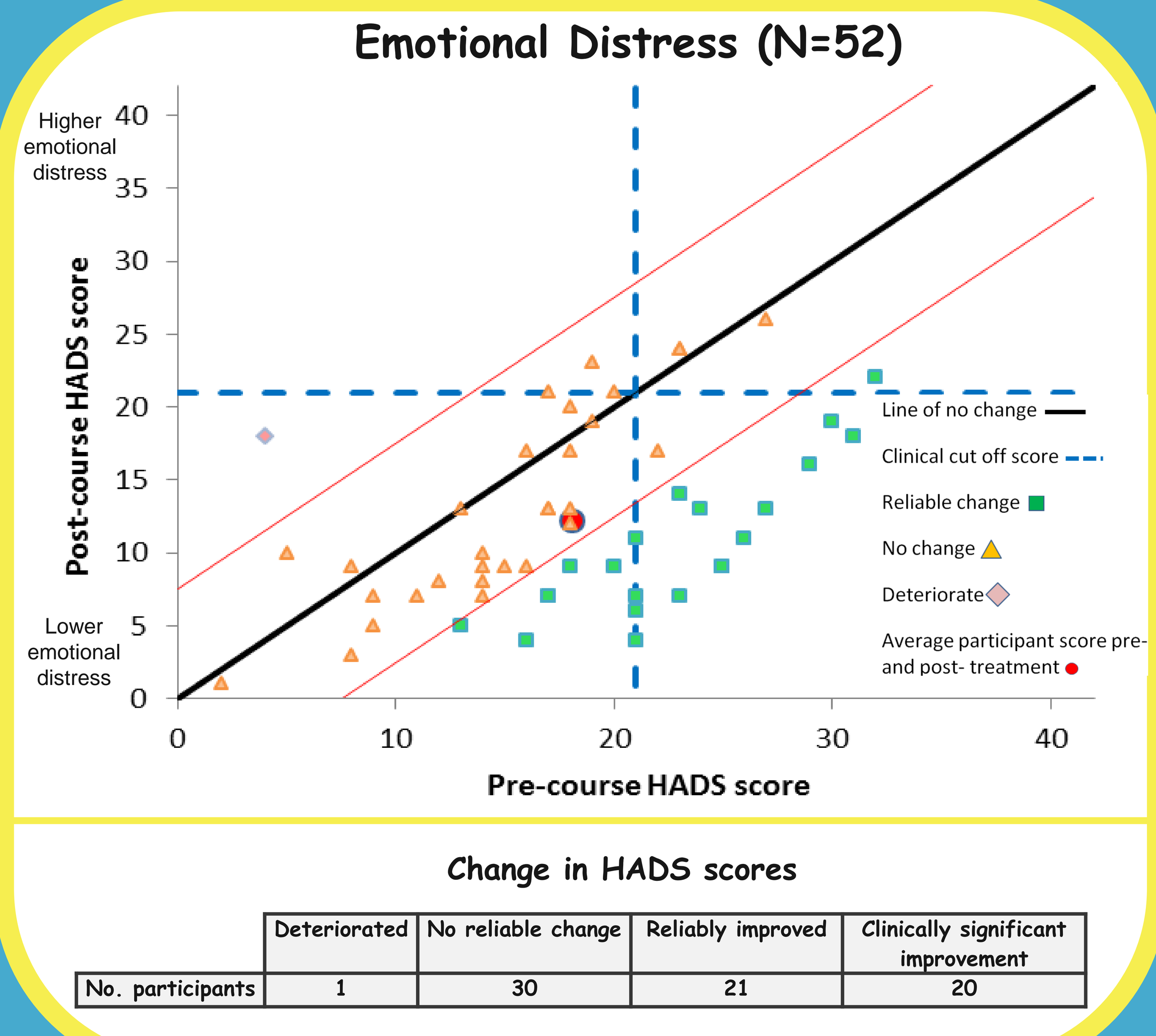
1) **Clinically significant** – the blue dotted line shows the clinical cutoff score: above this line is of clinical concern, so participants who had a clinically concerning score at pre-course but not post-course made a clinically significant improvement.

2) **Reliable** – the red line shows reliable change: outside the margin change can be attributed to treatment effects, not to random variation in the scale*

HADS scores range from 0 (best) to 42 (worst). We set the clinical cut off at 21. HADS scores were lower post-course (**mean 12.2, SD 6.2**) than pre-course (**mean 18.1, SD 6.8**), a statistically significant improvement**: $t(51) = 6.4$, $p < 0.001$** for a **large effect size, $d=0.87$**.

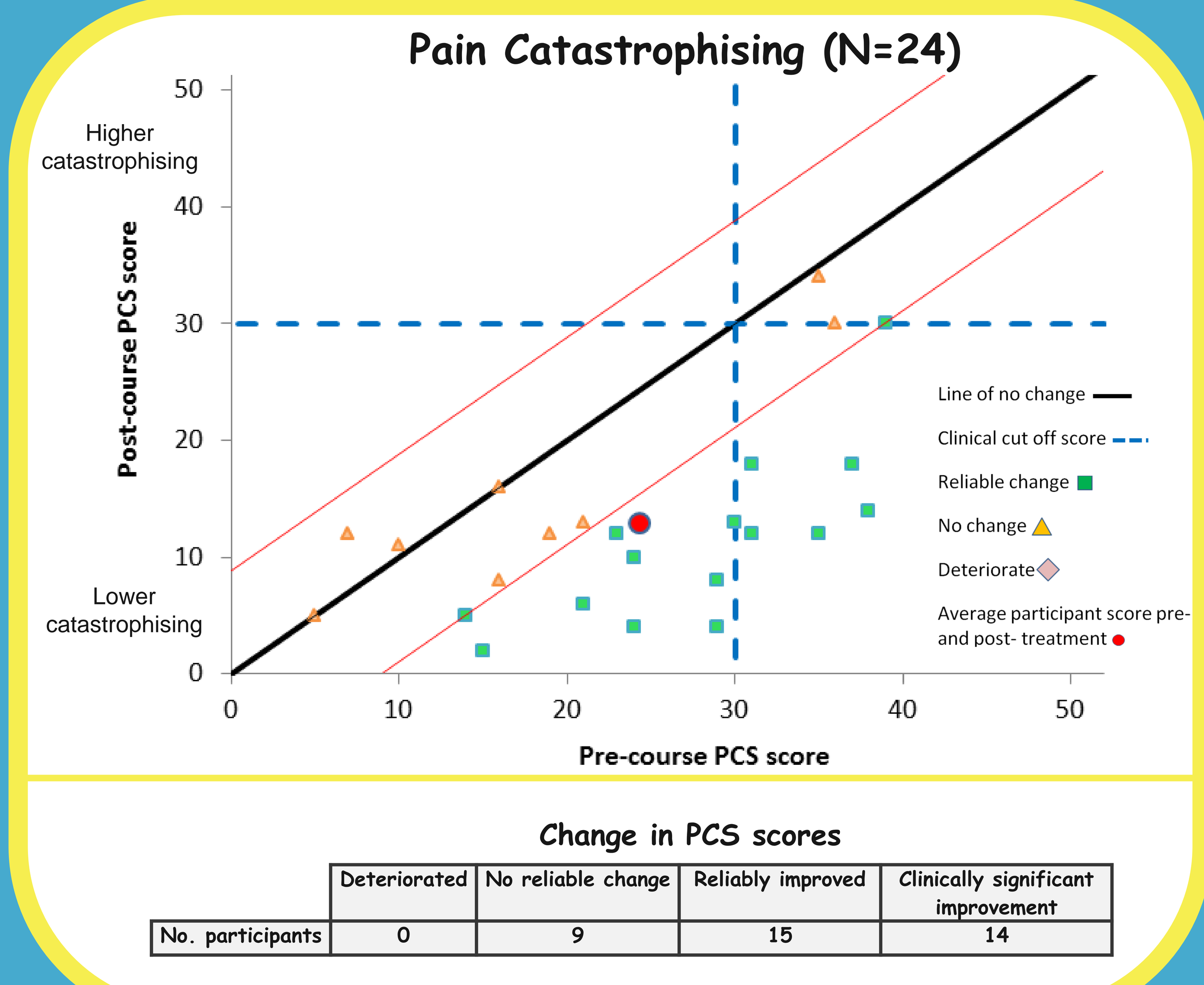
Pain catastrophising scores range from 0 (best) to 52 (worst). We set the clinical cut off at 30. The small N was because only patients with pain completed this questionnaire. PCS scores were lower post-course (**mean 12.9, SD 8.4**) than pre-course (**mean 24.4, SD 10.1**), a statistically significant improvement; **$t(23)=6.6, p < 0.001$** for a **large effect size, $d=1.14$**

**(see University of Leeds Reliable Change Index calculator http://medhealth.leeds.ac.uk/info/2692/research/1826/research/2)*



Change in HADS scores

	Deteriorated	No reliable change	Reliably improved	Clinically significant improvement
No. participants	1	30	21	20

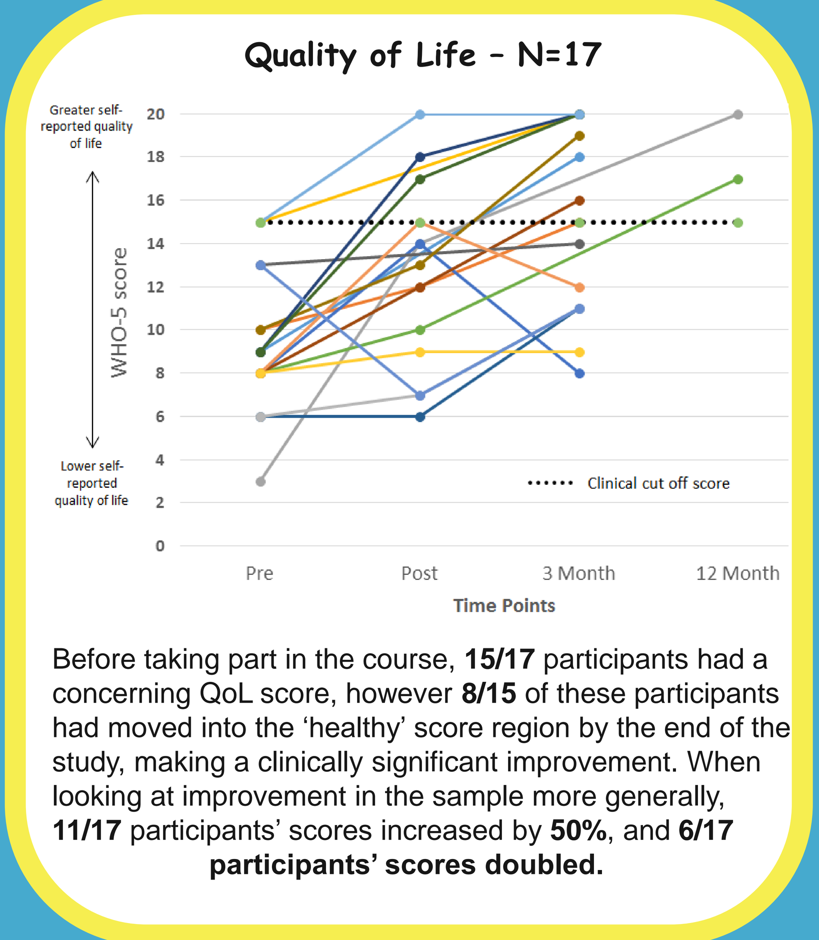


Change in PCS scores

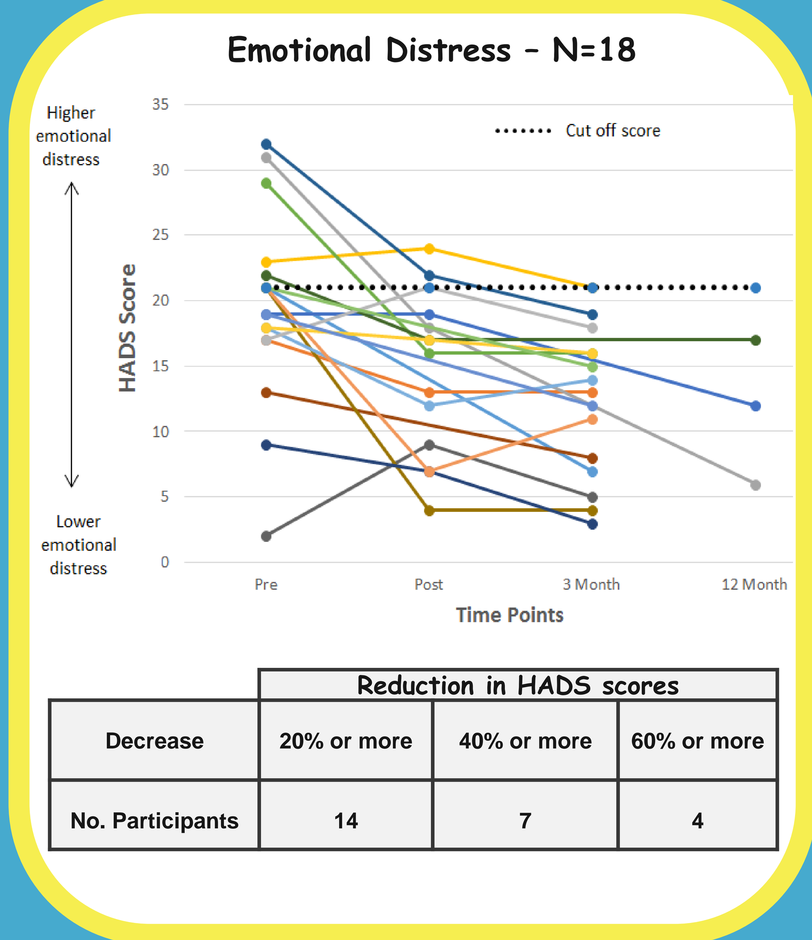
	Deteriorated	No reliable change	Reliably improved	Clinically significant improvement
No. participants	0	9	15	14

Longitudinal Effects of our MfH Course

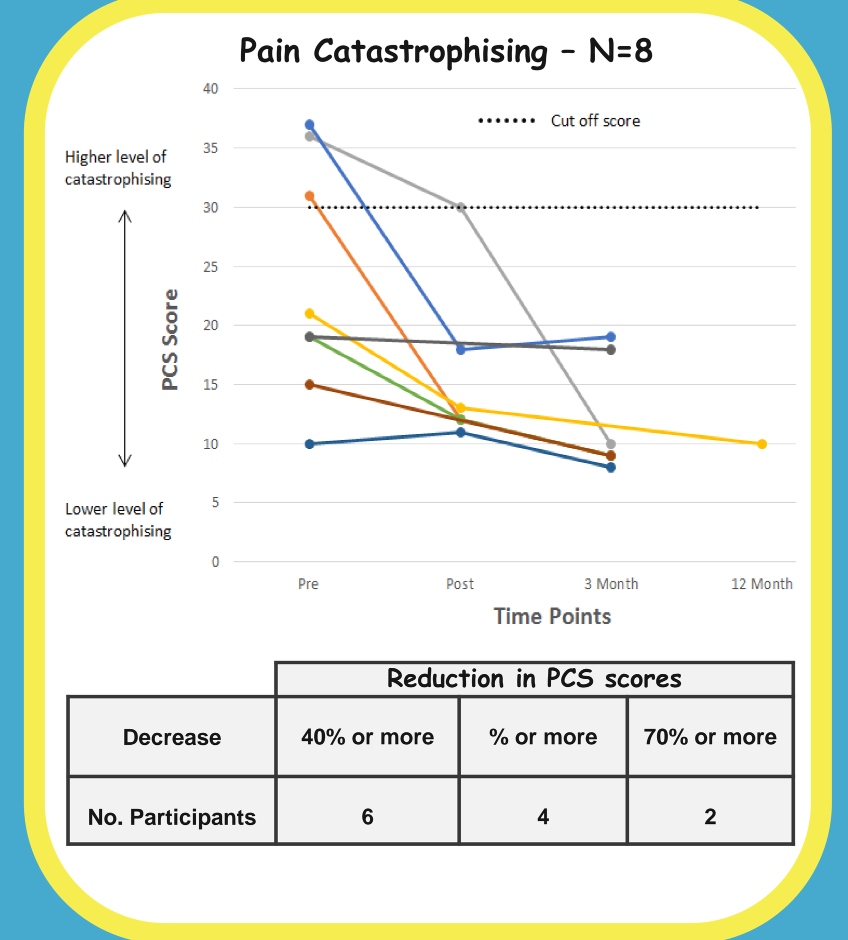
Below are individual participant scores over time for: quality of life, pain catastrophising and emotional distress. Only participants who had completed at least one follow-up (3 or 12 months) were included. The clinical cut off for quality of life, using the WHO-5, is 15, meaning that scores lower than the black dotted line were of clinical concern.



Before taking part in the course, **15/17** participants had a concerning QoL score, however **8/15** of these participants had moved into the 'healthy' score region by the end of the study, making a clinically significant improvement. When looking at improvement in the sample more generally, **11/17** participants' scores increased by **50%**, and **6/17 participants' scores doubled.**



Decrease	Reduction in HADS scores: 20% or more	40% or more	60% or more
No. Participants	14	7	4



Decrease	Reduction in PCS scores: 40% or more	% or more	70% or more
No. Participants	6	4	2

DISCUSSION

Our research has demonstrated benefits that our MfH courses have on the general wellbeing of patients managing chronic pain. The pain management programme has seen **both reliable and statistically & clinically significant improvements in quality of life, emotional distress and pain catastrophising**. In our extended research, we also found significant improvements in other variables such as:

- **Pain interference**
- **Fatigue severity and interference**
- **Self compassion**
- **Level of Mindfulness**
- **Sleep quality**

Further research collecting a larger sample of patients at 3 and 12 month follow up measures would be beneficial. Our next steps in research are to also investigate how our MfH course impacts on usage of our health care resources

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We are continually adding to our research base, and so if you are interesting in research partnership opportunities then please do get in contact with Colin Duff.

FINAL NOTES

We would like to thank Dr. Amanda C de C Williams (Reader in Clinical Health Psychology, UCL) for her invaluable help in overseeing our research and advising us on data analysis and the production of this poster. If you would like to contact Amanda, please email her at **amanda.williams@ucl.ac.uk.**

Declaration of interest: Vidyamala Burch and Colin Duff are employed by Breathworks CIC, a not-for-profit social enterprise that provides Mindfulness for Health courses and materials for people with chronic pain and other long term conditions.

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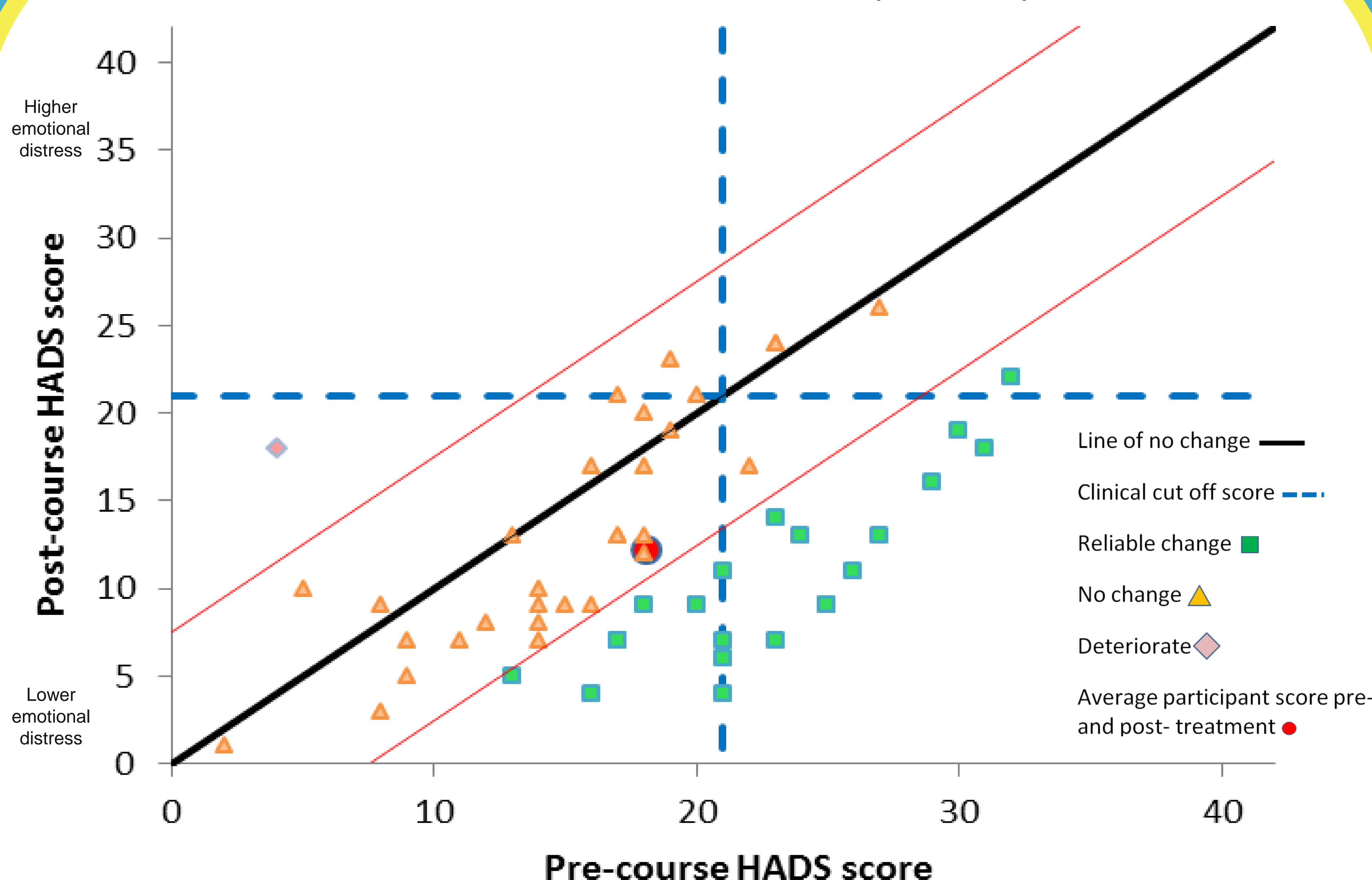
Emotional Distress (N=52)



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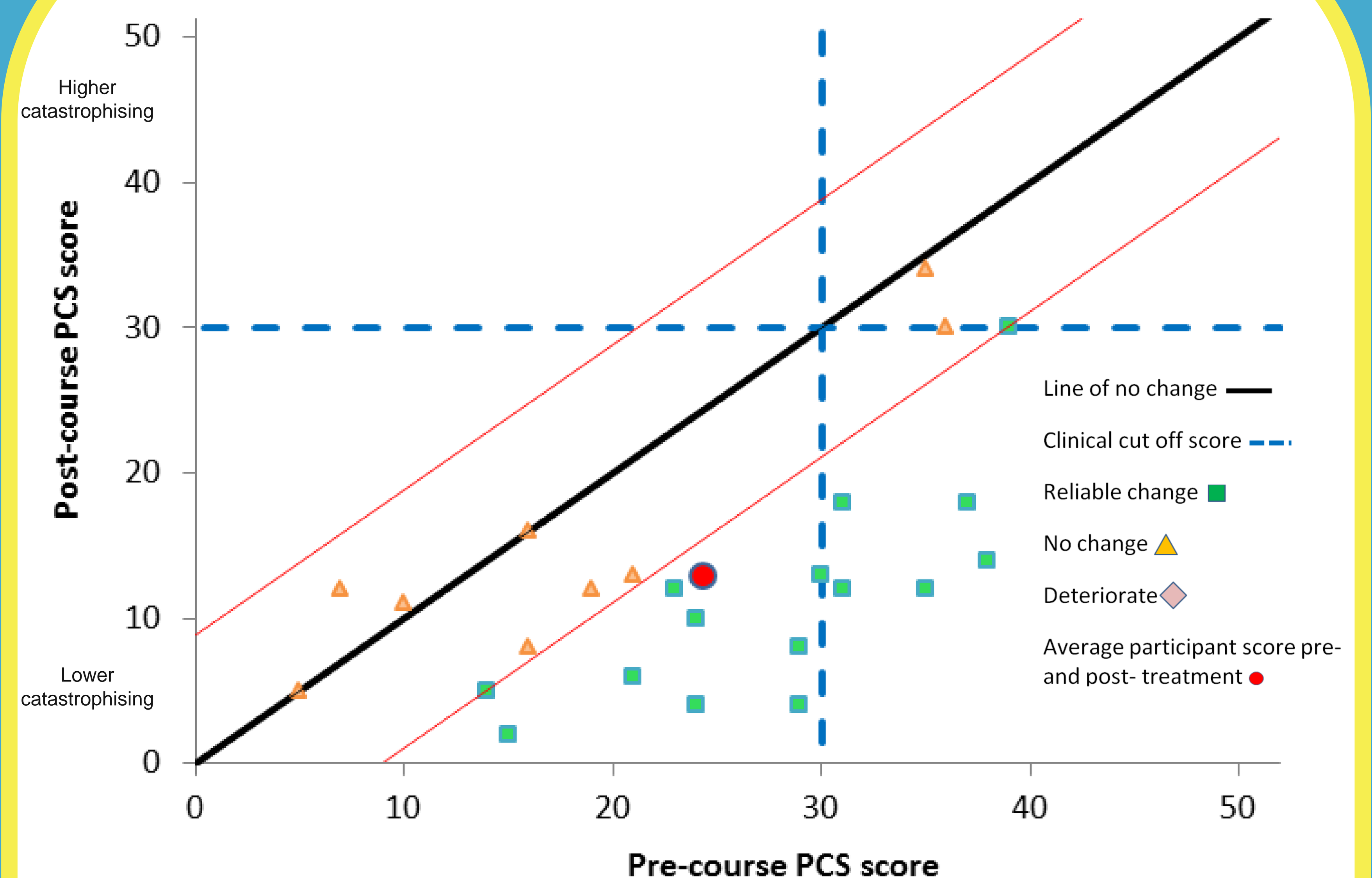
Pain Catastrophising (N=24)



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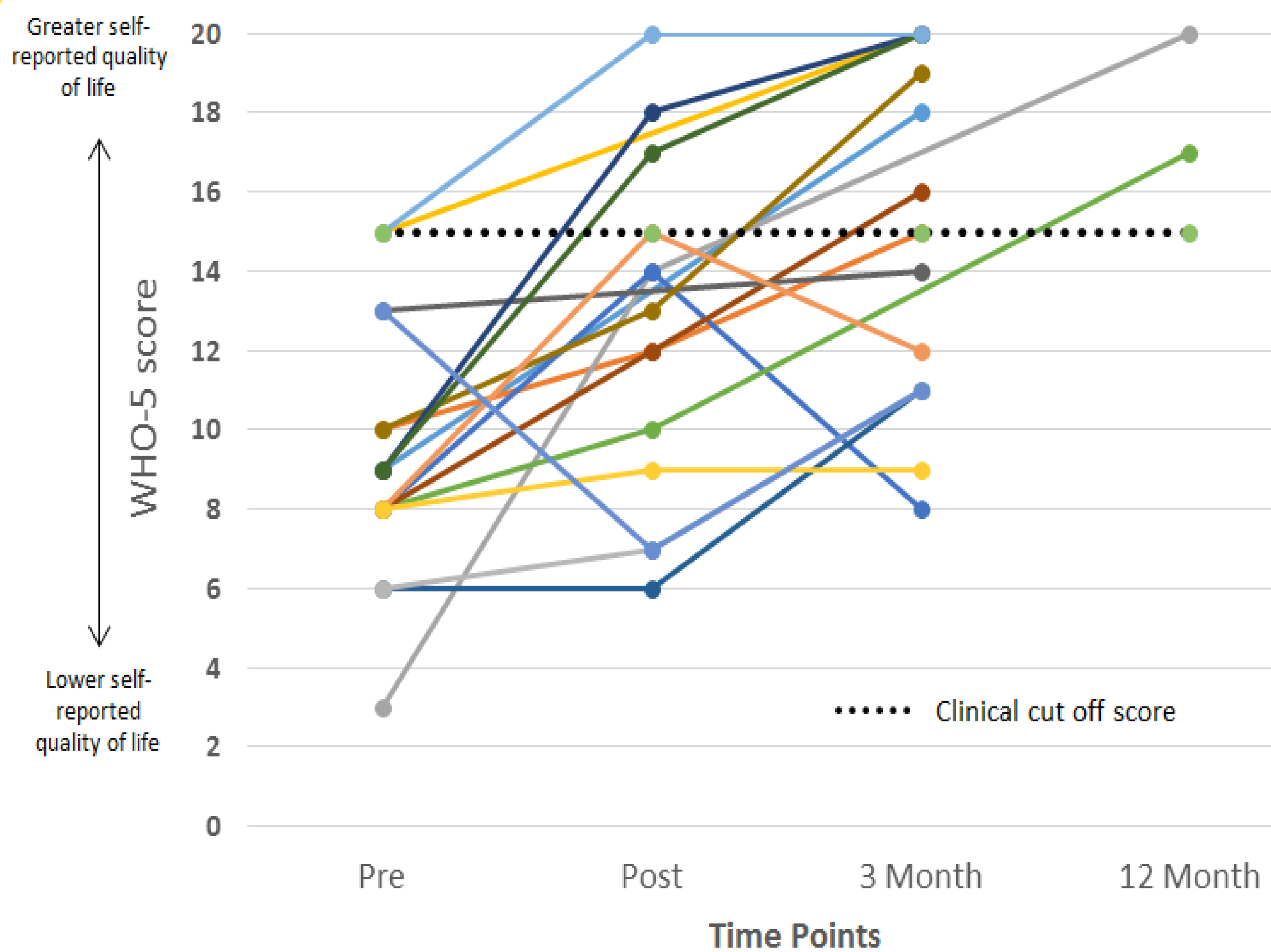
Quality of Life – N=17



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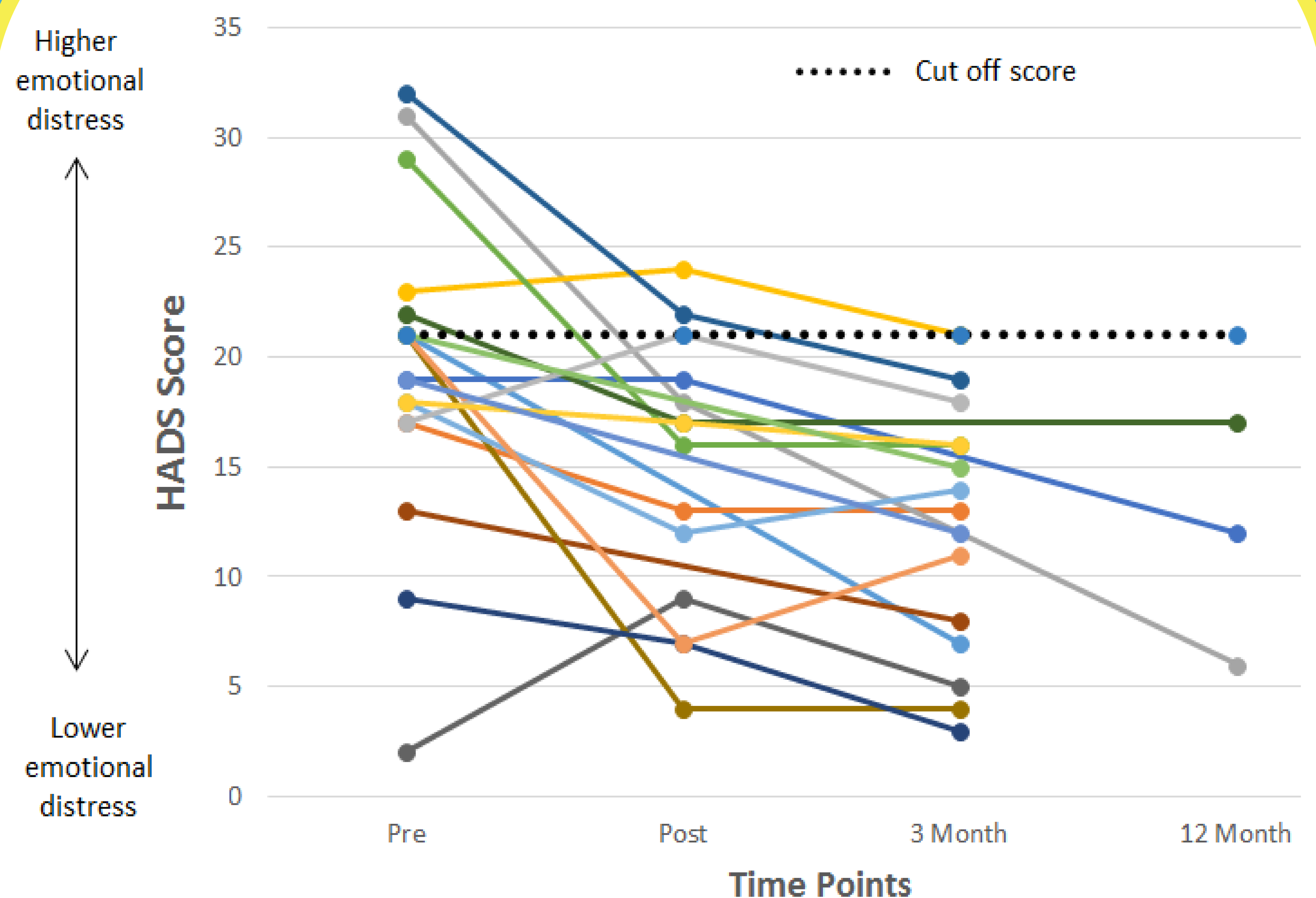
Emotional Distress – N=18



Decrease	Reduction in HADS scores		
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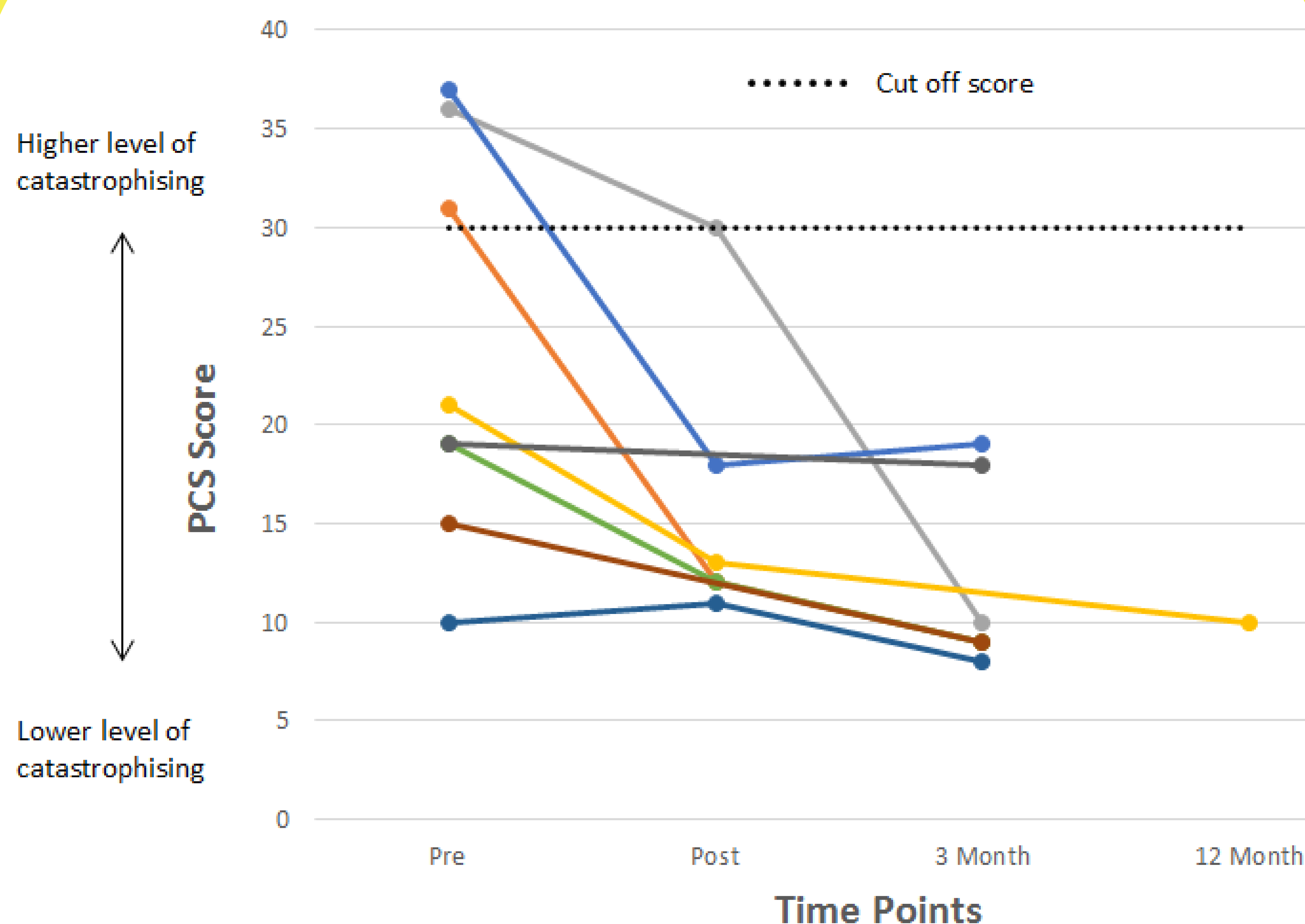
Pain Catastrophising – N=8



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