

# Does Patients' Perception of Improvement Following a Pain Management Programme Match Reported Minimally Clinically Important Differences?

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## Background

- Effectiveness of Pain Management Programmes (PMP) for chronic pain is well established.
- Clinically reliable change has been investigated but patients' impression of change has not been reported.
- Relationships and social interaction are important but not well recorded.
- Data is unavailable for clinically meaningful changes in pain acceptance.
- BPI mean change of 2.09 could be considered acceptable to patients<sup>1</sup>.
- Knowing how many patients perceive an improvement following treatment may assist patients in making informed choices regarding treatment.
- Benchmarking services nationally may be helped by understanding changes in outcome measures in the 'improved' cohort.

## Aims

- To evaluate clinical outcomes for patients attending a PMP.
- To determine whether patients who rated an improvement on GIC Score, achieved 'acceptable' mean changes in BPI.
- To determine mean changes on other outcomes in this population.

## Method

- Complete data for patients attending a standard 36 hour PMP was evaluated.
- Data was available for 164 patients.
- The programme was based on an Acceptance and Commitment Therapy psychological model.
- Patients consented to data being used for service evaluation. Ethical approval not required.

## Questionnaires

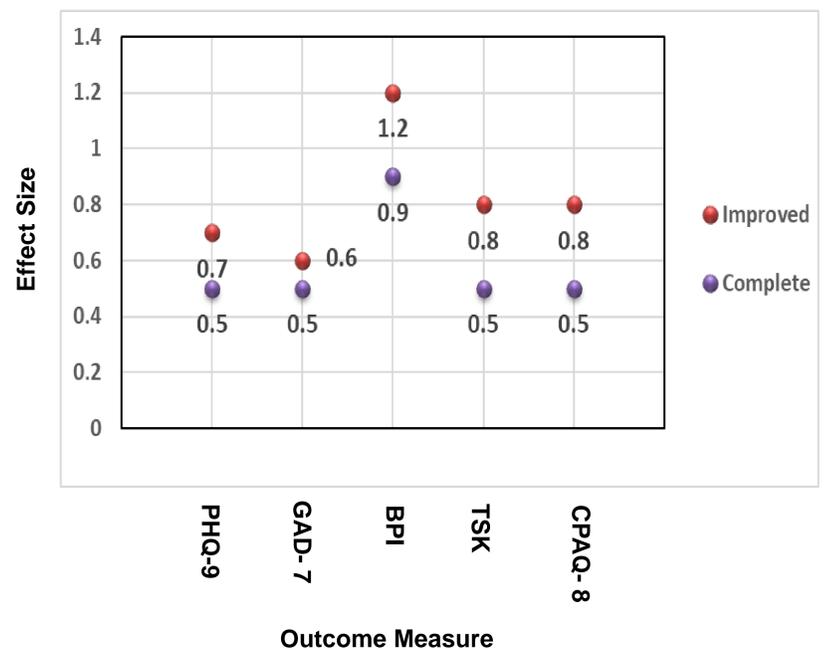
Completed prior to and 3 months post rehabilitation:

- Patient Health Questionnaire (PHQ-9).
- Generalised Anxiety Disorder Questionnaire (GAD-7).
- Brief Pain Inventory – Interference Scale (BPI).
- Tampa Scale of Kinesiophobia (TSK).
- Chronic Pain Acceptance Questionnaire (CPAQ-8).
- Global Impression of Change (GIC).

## Results

- 164 patients (62% of total cohort attending between 2015 - 2017) completed 3 month follow-up data.
- The mean BPI change was 2.2 in the improved group and 2.1 for the total cohort.
- 79 patients (48%) reported an improvement in GIC (between 5-7).

Effect Sizes of the Improved and Complete Cohort



Outcome Measure	Improved n = 79		Complete Cohort n = 164	
	Pre-Programme	Post-Programme	Pre-Programme	Post-Programme
	Mean (SD)		Mean (SD)	
PHQ - 9	13.5 (5.6)	10.1 (6)	13.9 (5.8)	11 (6.5)
GAD - 7	9.6 (5.7)	6.8 (5)	10.3 (5.8)	7.5 (5.4)
BPI	7.3 (1.7)	5.1 (2.2)	7.5 (1.9)	5.4 (2.4)
TSK	37.5 (9.4)	31.2 (9.4)	38.4 (9.4)	33.2 (10.1)
CPAQ - 8	19.6 (8.9)	24.5 (9.4)	18.8 (8.2)	23.2 (9)

## Conclusion

- The Improved cohort's BPI mean changes were 2.2 which mirrors the acceptable change cited by Thorne and Morley<sup>1</sup>.
- Effect sizes in the total cohorts were moderate to large, however < 50% of patients considered these changes to be acceptable.

## Clinical Importance

Clinicians may consider revising the previously considered estimate of a 1 point change on the BPI post treatment as clinically meaningful<sup>2</sup>. An understanding of changes expected following a standard PMP may assist clinicians when advising patients of the risks and benefits of treatment.

### References:

<sup>1</sup>Thorne, F.M. and Morley, S., 2009. Prospective judgments of acceptable outcomes for pain, interference and activity: patient-determined outcome criteria. PAIN, 144(3), pp.262-269  
<sup>2</sup>National Pain Audit (2012) British Pain Society