

Pacing PLUS

Can a Brief Interdisciplinary Group Pacing Program Improve Outcomes for People with Long Term Pain?

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Traditional pacing programs are led by physiotherapists or occupational therapists and aim to reduce the impact of pain on daily functioning. Current literature indicates that brief interventions focused on implementing pacing strategies as a means of improving activity interference have had little success^{1,2}.


A previous pilot pacing group program led by physiotherapists at MSPPMS showed no statically significant change on variables studied³. It was identified that while patients understood the concepts of activity pacing, they consistently reported psychosocial barriers to behaviour change. Subsequently, Pacing PLUS was born, a brief physiotherapist and psychologist led group program.

The aim of this study was to determine the effectiveness of Pacing PLUS, a program which specifically addresses psychosocial barriers to initiating and maintaining activity using elements of an Acceptance and Commitment Therapy (ACT) framework.

Demographics

 N = 57  37  20 **Mean Age = 42.0**
Patients self-selected into the groups run between May 2017 – July 2018 following a multidisciplinary assessment.

Intervention

 5 sessions: 2 hrs/week over 4 consecutive weeks & 2hr review one month later

Session 1

- a) Pain, behaviour and pacing
- b) Noticing, choosing and willingness

Session 2

- a) Neurophysiology of pain
- b) Pain cognitions, beliefs and creative hopelessness

Session 3:

- a) Contextual & psychosocial factors on pain
- b) Noticing & managing difficult thoughts & emotions with flexibility

Session 4:

- a) Values & Goals
- b) Workable strategy use to manage barriers
- c) Graded activity plans

Session 5 (one month review):

- a) Review of activity plans, strategies, barriers & behaviours
- b) Flare up plans
- c) Value directed goal setting & linking with the right services

Outcome Measures

The ePPOC (electronic Persistent Pain Outcomes Collaboration) questionnaire battery was completed pre- and post-intervention in addition to:

- Neurophysiology of Pain Questionnaire
- Activity Pacing Questionnaire (APQ26)
- Chronic Pain Acceptance Questionnaire - 8 (CPAQ-8)



Results

A series of paired sample t-tests were conducted to determine change after completion of the program (Table 1). Cohen's d was calculated for each test to determine effect size.

Significant changes in:

- Pain interference (BPI) [t(56)=2.98, p=.004]
- Activity pacing strategy use (APQ26) [t(54)=-3.42, p<.001]
- Pain knowledge (NPQ) [t(56)=-4.78, p<.001]
- Activity engagement (CPAQ-8) [t(56)=-3.10, p=.003]
- Pain willingness (CPAQ-8) [t(56)=-3.93, p<.001]
- Pain self-efficacy (PSEQ) [t(56)=-3.61, p<.001]
- Pain catastrophising (PCS) [t(56)=3.71, p<.001]

There was no significant change in:

- Psychological distress (DASS21)
 - Depression [t(56)=1.98, p=.053]
 - Anxiety [t(56)=1.66, p=.103]
 - Stress [t(56)=1.18, p=.245]
- Pain severity (BPI) [t(56)=1.32, p=.194]

The effect sizes suggest that the program had the strongest impact on pain knowledge, followed by pain willingness and pain self-efficacy.

Table 1 Paired sample t-tests for outcome measures before and after program participation

	Pre-Test		Post-Test		Cohen's d (*p<.05)
	Mean	SD	Mean	SD	
Activity pacing	52.68	19.54	59.63	16.96	0.46*
Activity engagement	11.21	5.19	12.63	4.9	0.41*
Pain willingness	8.35	4.81	10.42	4.86	0.52*
Pain self-efficacy	23.54	11.88	27.86	10.94	0.51*
Pain knowledge	6.18	2.63	7.6	2.01	0.63*
Pain severity	5.53	1.59	5.33	1.55	0.18
Pain interference	6.38	1.96	5.68	2.14	0.40*
Pain catastrophising	23.92	12.5	19.56	11.38	0.49*
Depression	18.83	11.58	16.84	11.36	0.26
Anxiety	16.49	10.59	15.19	10.45	0.22
Stress	22.18	9.5	21.26	9.98	0.16

Discussion & Future Direction

The findings of the current study suggest that a 10-hour interdisciplinary group pacing program can effectively reduce the impact of pain on daily functioning. Despite no significant changes in pain intensity or psychological distress, participants reported less activity interference due to pain and increased self-efficacy. Activity engagement and utilisation of pacing strategies also increased. By incorporating elements of an ACT framework⁴, the intervention drew on a psychological flexibility model that aims to increase willingness to experience pain and difficult emotions and commitment to take action in line with personal values and goals. While the present study is a pilot not randomised controlled trial, future research could look at whether variables such as pain willingness and pain knowledge mediate changes in areas such as pacing strategy utilisation, interference & activity engagement. As effect sizes in the present study were small to moderate, there is scope for further improvement as this program may serve as a precursor to an intensive multidisciplinary pain program, with the potential of greater change in the above measures when compared to an intensive program alone.

References

1. Antcliffe, D., et al (2017) Activity Pacing is Associated with Better and Worse Symptoms for Patients With Long-term Conditions.
 2. Murphy, S., et al (2016) Brief time-based activity pacing instruction as a singular behavioral intervention was not effective in participants with symptomatic osteoarthritis.
 3. Walsh, K., et al (2018) Improving a pacing program for people with persistent pain: a group evaluation. Poster presented at APS Conference 2018
 4. Antcliffe, D., et al (2018) Activity Pacing: Moving beyond taking breaks and slowing down.
- Ethical approval to proceed with this study was granted by the Metro South Health Human Research Ethics Committee