A Systematic Review of RCTs of ACT in Chronic Pain Management: Outcome Measures and Delivery from a Physical Function Perspective

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Background

Acceptance and Commitment Therapy (ACT) focuses on increasing function & engagement in valued life rather than pain reduction. Physiotherapists have an invaluable role here, but studies evaluating the efficacy of ACT have never been analysed from a physical function perspective.

- Research & evidence-based guidelines state that pain management programmes (PMPs) should be delivered by an interdisciplinary team, with the physiotherapist as an integral member.
- Both self-report measures and performance-based measures are necessary to comprehensively measure the construct of physical function. This idea is consistently supported by research in chronic pain that reveals poor correlations between these 2 formats.[1-4]
- The APA lists ACT as having strong empirical support in the domain of Chronic Pain, based on RCT evidence.

Objectives

- Identify Randomized Controlled Trials (RCTs) that evaluate the efficacy of ACT for chronic pain management & establish the following:
  1. How is physical function measured?
  a) Is it comprehensively measured (e.g. self report, performance-based, both)?
  b) Is it consistently selected as a primary outcome?
  2. How is the ACT intervention being delivered?
  a) Are physiotherapists involved?
  3. Does planned research differ within these areas? (i.e. Analysing RCT-protocols)

Methods

Eligibility Criteria:
- Study Type: RCTs & Protocols of RCTs, published & unpublished articles excluding experimental studies
- Participants: Adults with non-oncological chronic pain, excluding headaches & other non-related conditions
- Intervention: At least 1 ACT-based intervention
- Time frame: January 1999 to December 2014
- No restrictions on language, control group, outcome measures, or delivery.
- A pre-specified data extraction tool was used across all studies (protocols were analysed separately).
- RCTs were assessed for Quality & Risk-of-Bias.[5]

Limitation: Study selection, data analysis and Quality/Risk-of-Bias tools were completed by a single researcher. However, all tools received high consensus ratings in a pilot by two independent researchers.

Results

1. Measuring Physical Function

1a) Type of Outcome Measure - % across 16 RCTs

- Self-report, Questionnaires (only)
- Performance-based Measures (only)
- Both (i.e. Self-report & Accelerometer)

1b) 9 different outcome measures identified - 8 were self-report.

1c) 50% of RCTs measured physical function as a primary outcome

2. Delivering ACT

2a) % Intervention Delivery across 16 RCTs

- Psychologist (only)
- Psychologist + Physician (for 2 sessions)
- Physiotherapist
- Multi-disciplinary Team (MDT)

2b) 100% Protocols proposed only self-report

3. 75% Protocols involved a Physiotherapist

References


Quality Assessment Results

'Cochrane Risk of Bias' Graph:

- Ratings of each domain presented as percentages across 16 eligible RCTs

<table>
<thead>
<tr>
<th>Domain</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Randomization</td>
<td>75%</td>
</tr>
<tr>
<td>Allocation</td>
<td>100%</td>
</tr>
<tr>
<td>Blinding of outcome</td>
<td>50%</td>
</tr>
<tr>
<td>Incomplete outcome data</td>
<td>100%</td>
</tr>
<tr>
<td>Selective reporting</td>
<td>100%</td>
</tr>
<tr>
<td>Allocation concealment</td>
<td>Low RoB</td>
</tr>
<tr>
<td>Random sequence generation</td>
<td>Low RoB</td>
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</tbody>
</table>

Average Yates Scale Quality Ratings

<table>
<thead>
<tr>
<th>Scale</th>
<th>Average</th>
<th>Range</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Quality Scale (n=9)</td>
<td>7.15</td>
<td>2.4</td>
<td>1.67</td>
</tr>
<tr>
<td>Bias &amp; Methods Scale (n=23)</td>
<td>17.02</td>
<td>9.2</td>
<td>4.31</td>
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<tr>
<td>Overall Score (n=35)</td>
<td>24.75</td>
<td>10.35</td>
<td>5.88</td>
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Conclusion & Recommendation

- Physical function is not being comprehensively or effectively measured in the RCT research.
- Planned research is focusing on physiotherapy-delivered treatments, but continues to restrict outcome measurement to self-report

Recommendation: Future RCTs should include performance-based measures alongside self-report modalities, for a more comprehensive assessment of physical functioning.

- The lack of an interdisciplinary (or MDT) approach may challenge the generalisability of findings to those PMPs that follow guidelines.

Contact & Further Information

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