



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

Cleo Barrable<sup>1</sup> & Guy Canby<sup>1</sup>

<sup>1</sup>School of Health Sciences, University of Brighton, United Kingdom



University of Brighton

## 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<sup>1</sup> & evidence-based guidelines<sup>2</sup> 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<sup>3-4</sup>.
- The APA<sup>5</sup> 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)

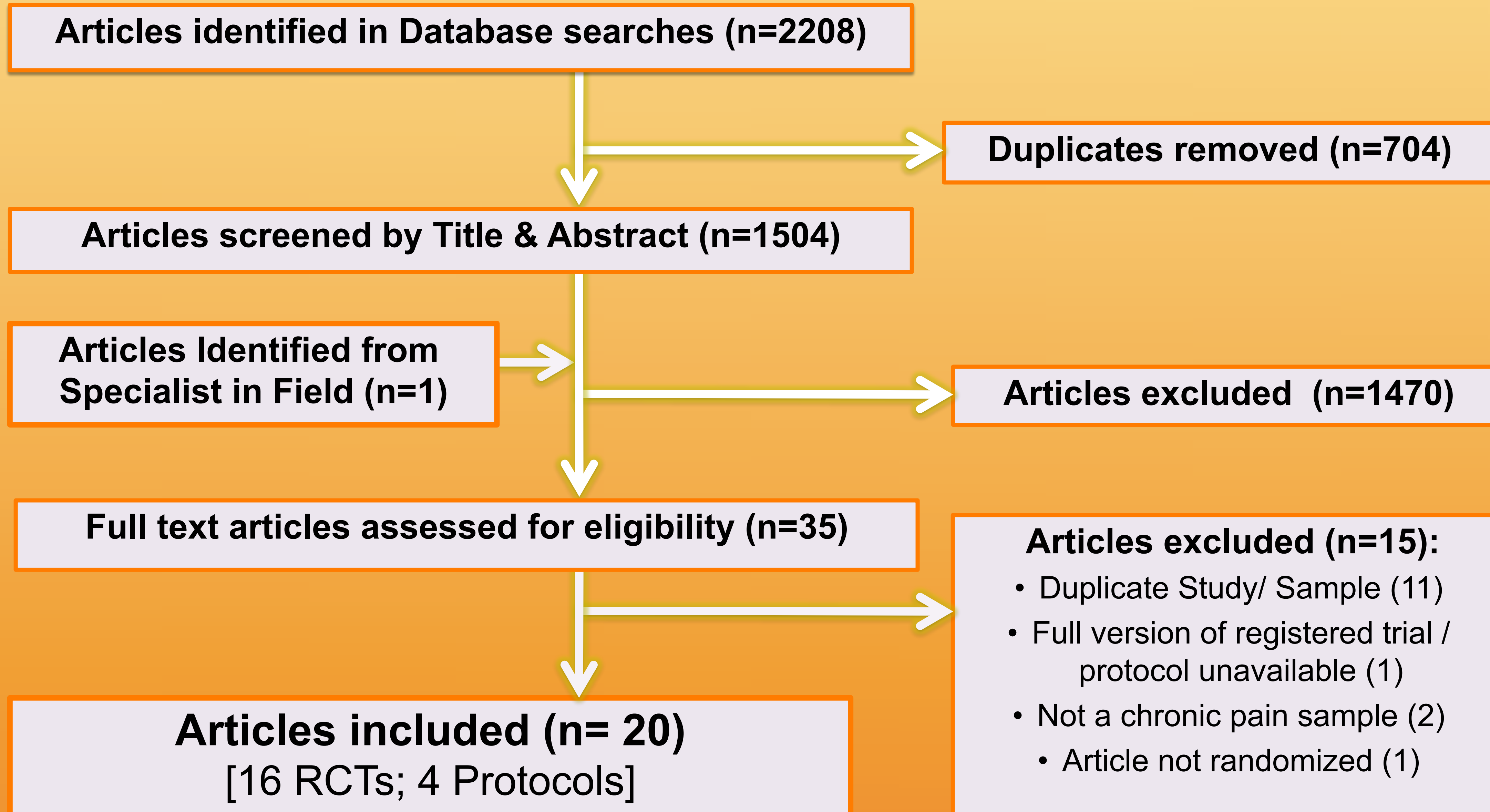
## Methods

### Eligibility Criteria:

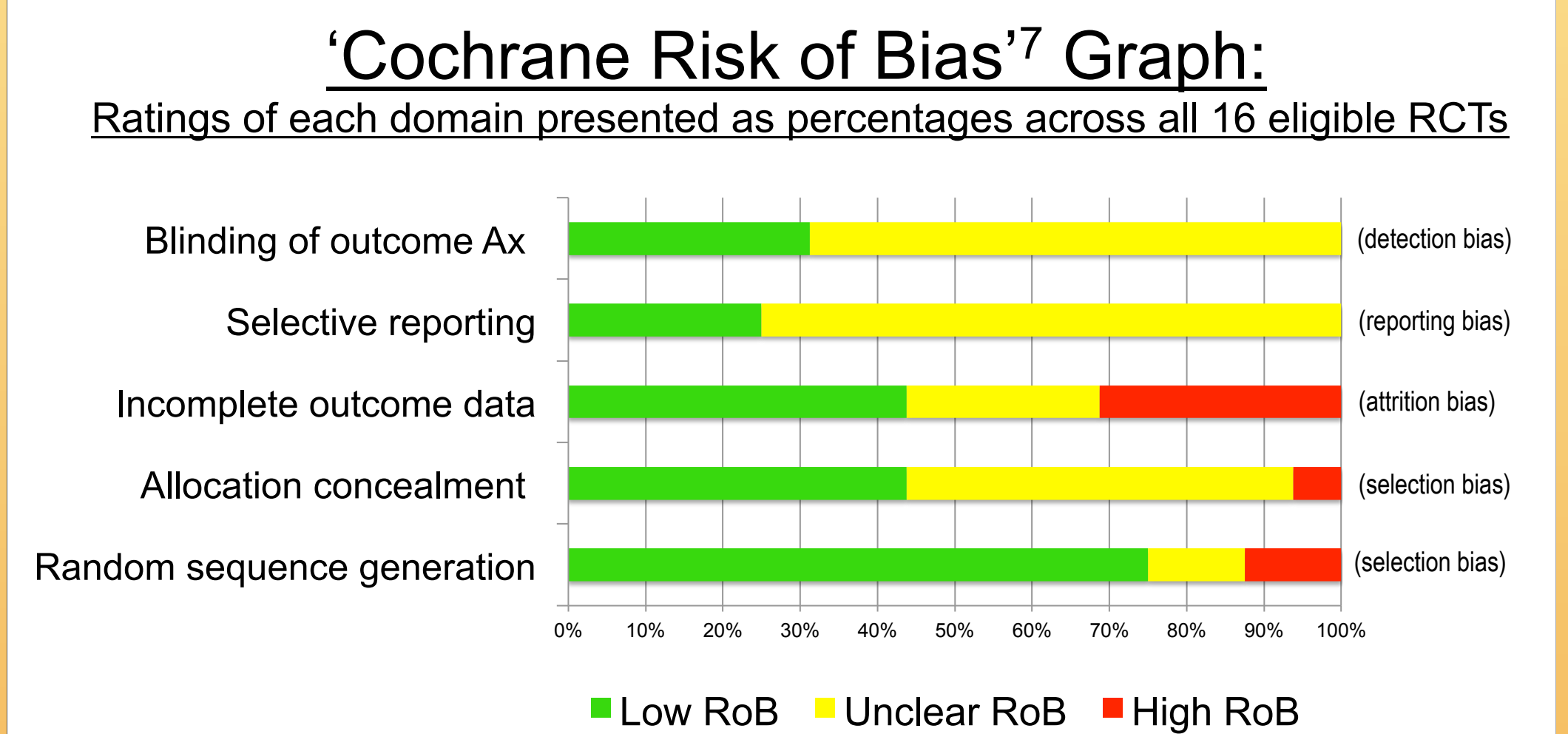
- **Study Type:** RCTs & Protocols of RCTs, published & unpublished articles *excluding* experimental studies
- **Participants:** Adults with non-oncological chronic pain, *excluding* headaches & other non-related conditions
- **Intervention:** At least 1 ACT-based intervention
- **Time frame** = January 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<sup>6</sup> and Risk-of-Bias<sup>7</sup>.
- **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

## Study Selection (Results - Flow Diagram)

A comprehensive 4-step search strategy was utilized, including a systematic search across 12 databases, 2 trials registries & hand searches of relevant websites, reference lists of selected articles & contact with specialists in the field (see further info section)



## Quality Assessment Results



### Average Yates Scale<sup>6</sup> Quality Ratings

Name of Scale	Average (mean)	Range	Standard Deviation
Treatment Quality Scale (n/9)	7.13	2-9	1.67
Design & Methods Scale (n/26)	17.63	9-23	4.11
Overall Score (n/35)	24.75	16-31	5.08

## 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.

## References

1. Flor, H., Fydrich, T., & Turk, D.C. (1991). Efficacy of multidisciplinary pain treatment centres: a meta-analytic review. *Pain*, 49(2), 221-230.
2. British Pain Society. (2013). *Guidance for Pain Management Programmes for adults: an evidence-based review prepared on behalf of the British Pain Society*. London, United Kingdom: British Pain Society
3. Harding, V.R., Williams, A.C., Richardson, P.H., Nicholas, M.K., Jackson, J.L., Richardson, I.H., & Pither, C.E. (1994). The development of a battery of measures for assessing physical functioning of chronic pain patients. *Pain*, 58(3), 367-375.
4. Wæhrens, E.E., Amris, K., Fisher, A.G. (2010). Performance-based assessment of activities of daily living (ADL) ability among women with chronic widespread pain. *Pain*, 150(3), 535-541.
5. American Psychological Association, APA. (2011). Society of Clinical Psychology, Division 12: Acceptance and Commitment Therapy for Chronic Pain. Retrieved Feb 12, 2015, from [https://www.div12.org/Psychological\\_Treatments/treatments/chronicpain\\_act.html](https://www.div12.org/Psychological_Treatments/treatments/chronicpain_act.html)
6. Yates, S.L., Morley, S., Eccleston, C., & Williams, A.C. (2005). A scale for rating the quality of psychological trials for pain. *Pain*, 117(3), 314-325.
7. Higgins, J.P., Altman, D.G., Gotzsche, P.C., Juni, P., Moher, D., Oxman, A.D... & Sterne, J.A. (2011). The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. *BioMed Journal*, 343.

## Contact & Further Information

For questions or comments please contact Cleo Barrable at [cleo765@gmail.com](mailto:cleo765@gmail.com)

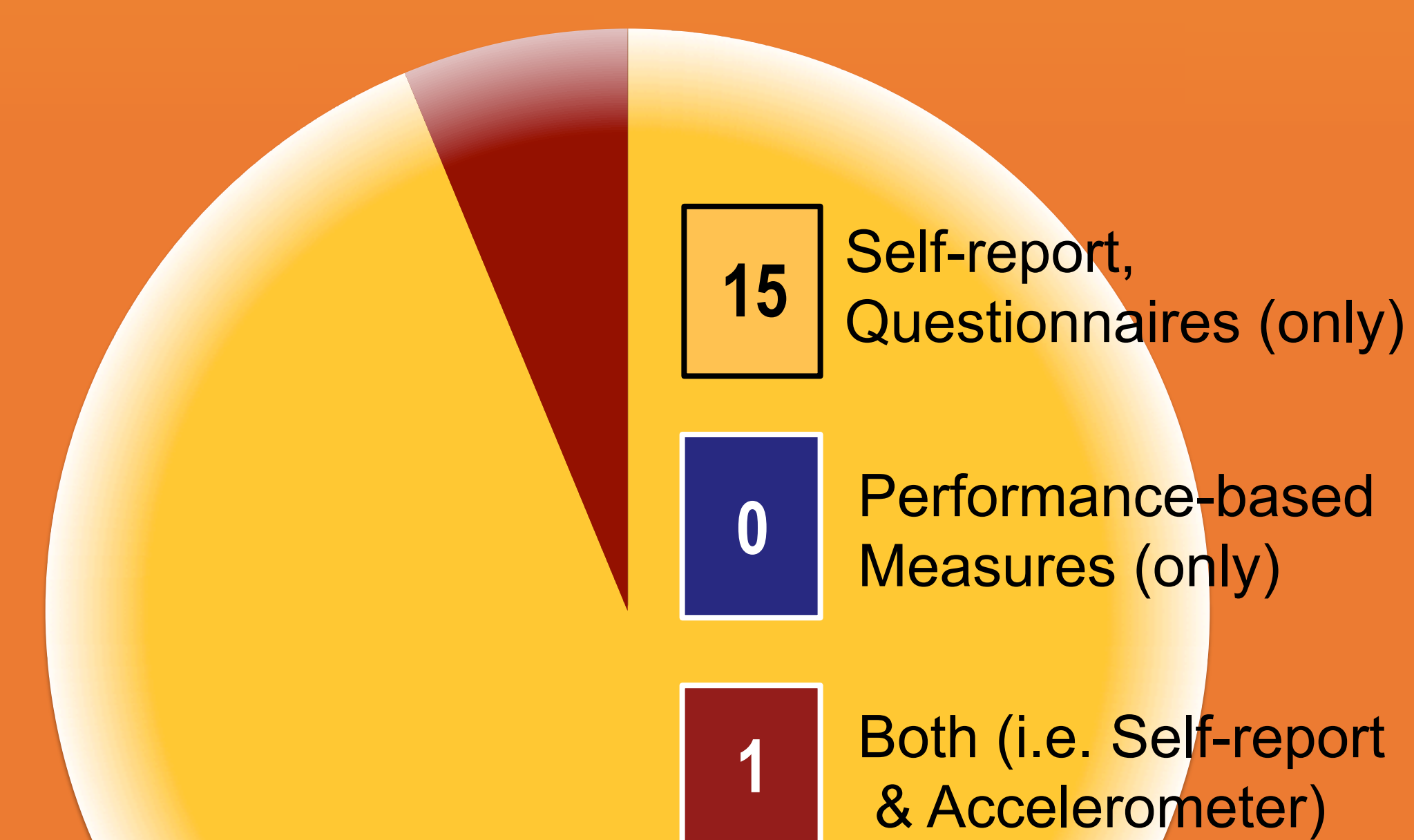
List of 12 Databases included in systematic search: OVID (Medline & Embase); EBSCO (AMED, CINHAL & PSYCInfo); Sage Journals; Science Direct; PROQUEST (Including ProQuest Hospital Collection, ProQuest dissertations and Theses; International Bibliography of Social Sciences); Cochrane Library; Google Scholar. and 2 Trial registries: ClinicalTrials.gov; & ISRCTN Registry

## Results

### 1. Measuring Physical Function

### 2. Delivering ACT

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



- 1a) 9 different outcome measures identified - 8 were self-report.
- 1b) 50% of RCTs measured physical function as a primary outcome

3. 100% Protocols proposed only self-report

#### 2a) % Intervention Delivery across 16 RCTs



& 75% Protocols involved a Physiotherapist