

Managing Swallowing Disorders in Adults With Intellectual Disability: A Systematic Review of the Evidence

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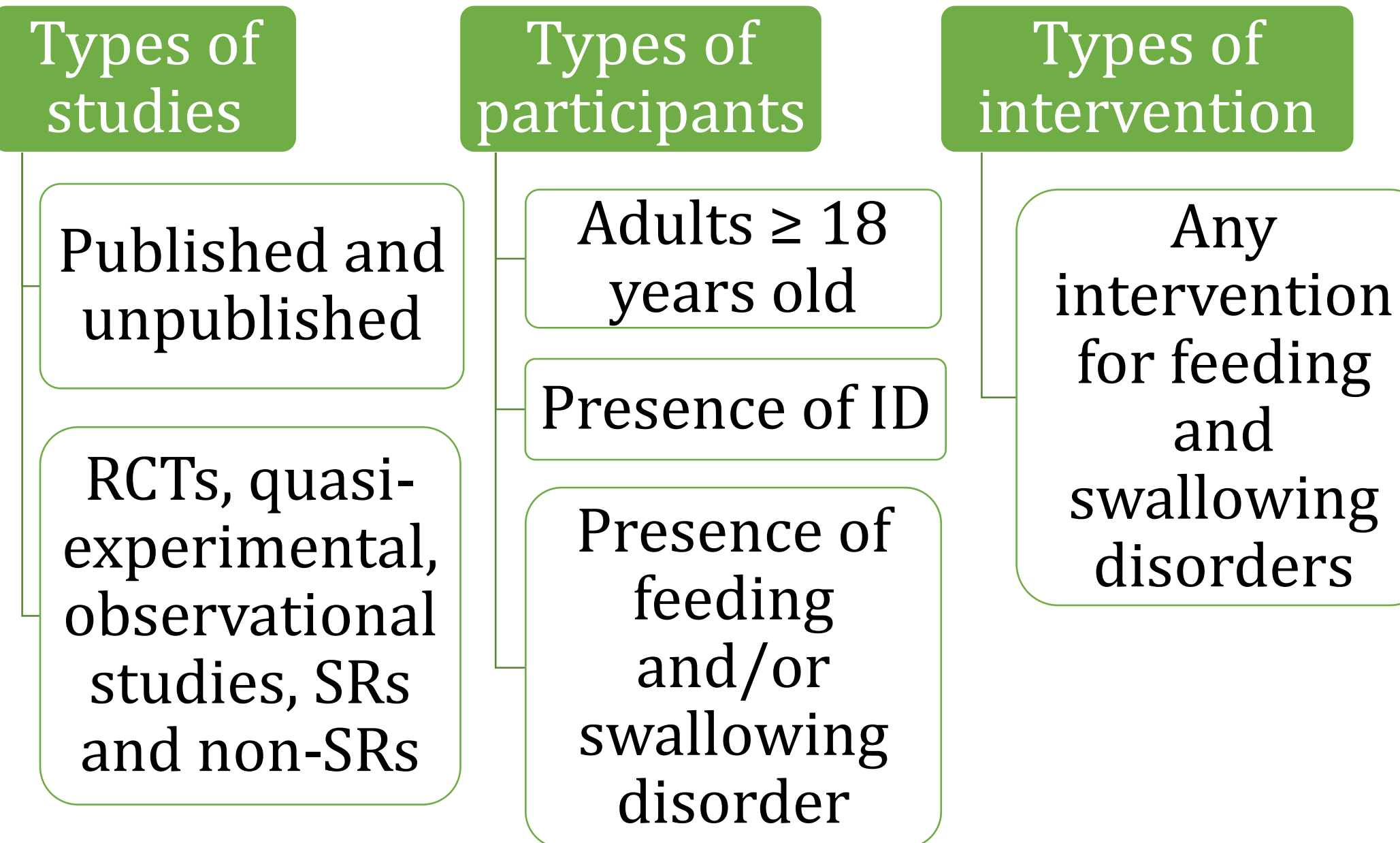
Introduction

- The health condition defined as “Intellectual Disability” (ID) is a developmental disorder characterized by significant deficits in both intellectual functioning and adaptive behavior, with onset before age 18 years.
- Feeding and swallowing difficulties affect approximately 8.1% to 11.5% of adults with ID^{1,2}.
- Difficulties in feeding and swallowing can potentially lead to discomfort, poor nutritional status, dehydration, aspiration and choking³. Respiratory infections are a leading cause of death in people with ID.
- Most common interventions for feeding and swallowing difficulties include: diet modification, compensatory strategies, swallowing therapy and, in some cases, enteral feeding³.
- These intervention practices are empirically unverified and untested.

Aims

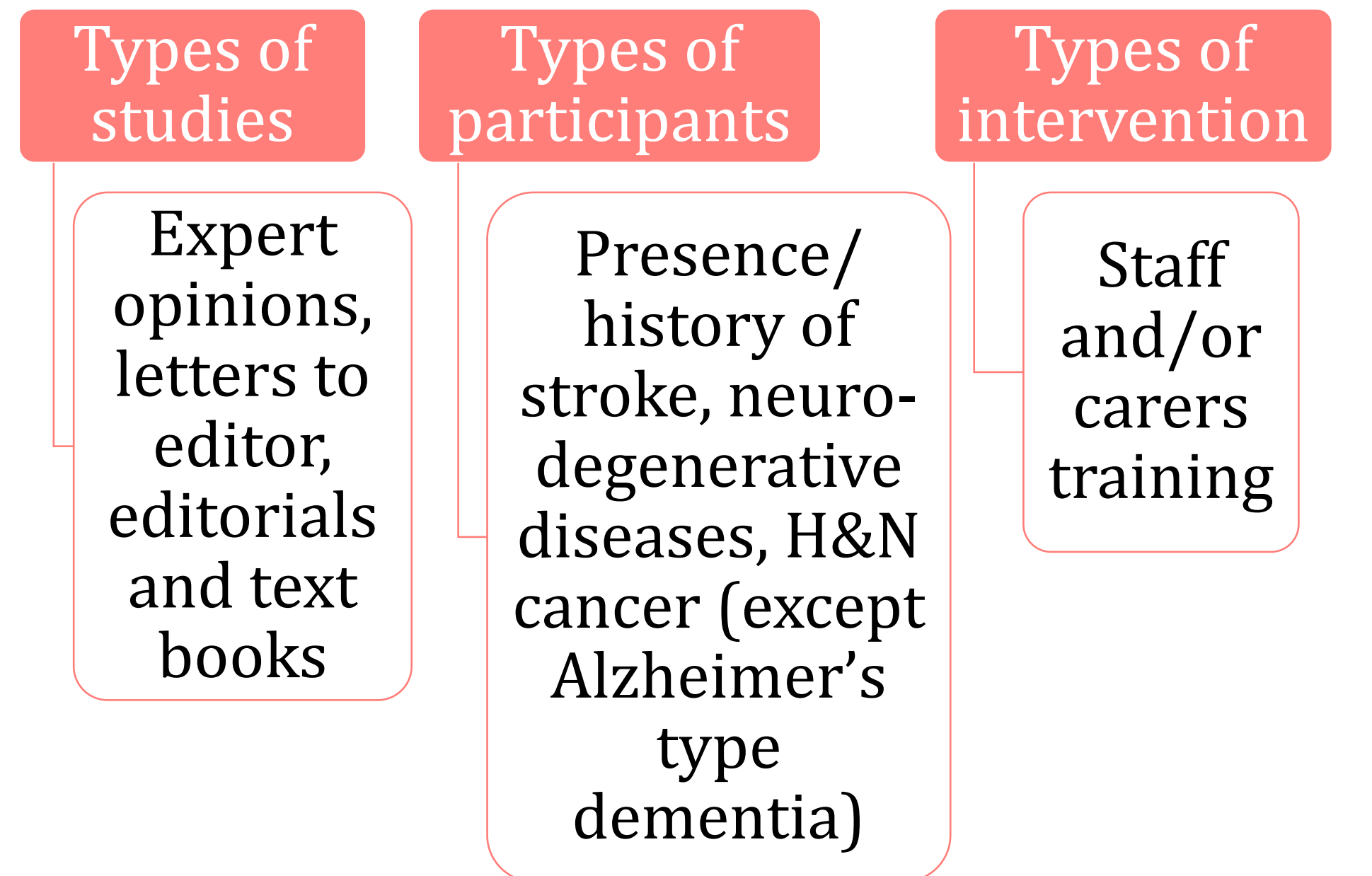
- To establish the safety and effectiveness of interventions for feeding and swallowing disorders in adults with ID;
- To critically appraise the evidence to inform clinical practice;
- To identify key areas for future research on the topic.

INCLUSION CRITERIA



Material & Methods

EXCLUSION CRITERIA



PRIMARY OUTCOMES

- Improvements in swallowing functions
- Decreased number of respiratory infections
- Reduction of choking/ asphyxiation instances

SECONDARY OUTCOMES

- Change in nutritional status
- Change in quality of life measures
- Compliance with interventions
- Adverse events

SEARCH METHODS

- 9 electronic databases
- Conference proceedings and unpublished abstracts
- Websites of clinical trials
- ProQuest dissertation database
- Reference list of relevant studies

No date restrictions

From inception April 2018

DATA COLLECTION AND ANALYSIS

Selection of studies → 2 independent reviewers

Data extraction → 2 independent reviewers

Qualitative data analysis

Risk of bias assessment through “Downs and Black’s checklist”⁴

Results

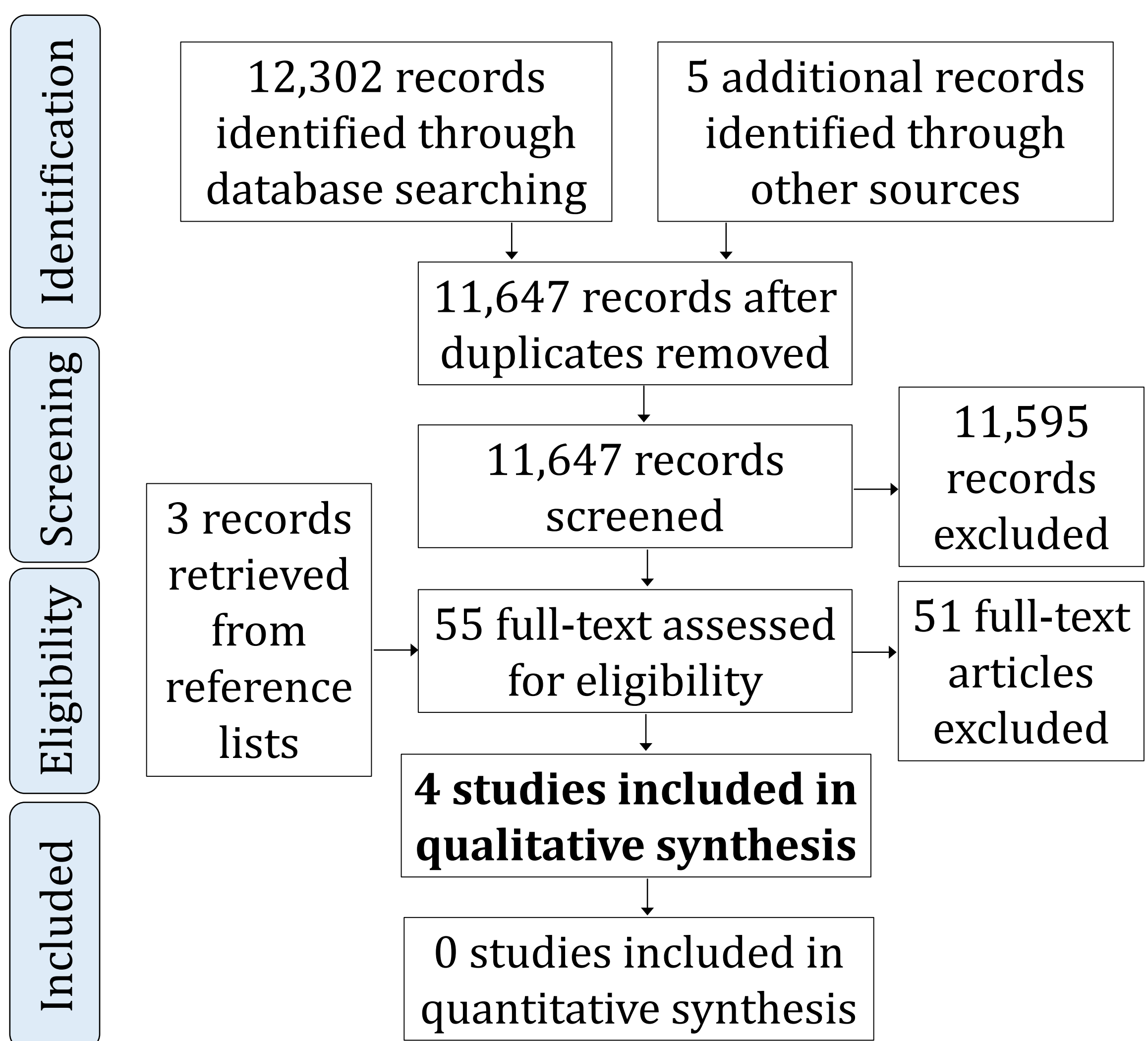


Fig. 1 PRISMA flow diagram

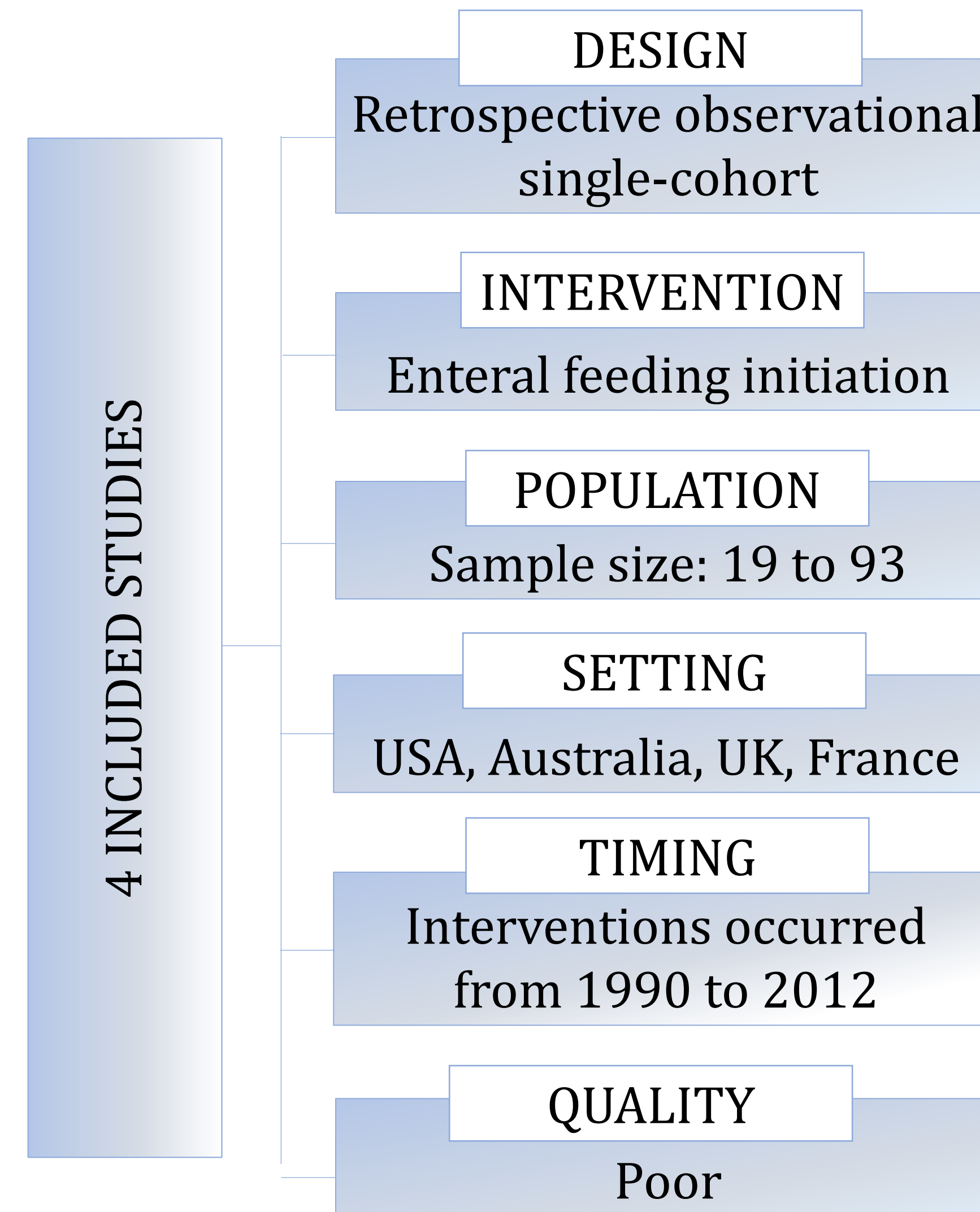


Fig. 2 Characteristics of included studies

Authors, year	Intervention outcomes
Gray & Kimmel, 2006 ⁵	↑ Respiratory functions
Lee & Macpherson, 2010 ⁶	↑ Nutritional status ↓ QoL ↑ Adverse events
Ayres, et al., 2014 ⁷	↔ Nutritional status ↑ Adverse events
Davout, et al., 2016 ⁸	↔ Respiratory functions ↑ Nutritional status ↑ QoL ↑ Adverse events

Tab. 1 Main outcomes of included studies

Clinical relevance

- Sanction to enteral feeding initiation should involve all stakeholders
- Risks and benefits have to be balanced on an individual basis
- Pre-operative radiological screening
- Post-operative strict monitoring
- MDT working for timing referral and high-quality aftercare

Conclusion

- Paucity in quantity and quality of studies retrieved → no firm conclusion on safety and effectiveness of enteral feeding as intervention
- No evidence for any other type of intervention
- Big gap in the evidence-based practice
- Further research needed

Further research

- Prospective, longitudinal, case-control design
- On representative sample (including population > 40 years old)
- Testing the intervention practices most commonly used during mealtime:
 - Modification of food texture
 - Prompting and pacing
 - Provision of adapted equipment

Selected references

1. Chadwick & Jolliffe. *J Intellect Disabil Res.* **2009**, 53(1)
2. Ball et al. *J Intellect Disabil Res.* **2012**, 56(4)
3. Robertson et al. *Intellect Dev Disabil.* **2017**, 55(6)
4. Downs & Black. *Epidemiol Community Health.* **1998**, 52(6)
5. Gray & Kimmel. *Am J Ment Retard.* **2006**, 111(2)
6. Lee & MacPherson. *Intern Med J.* **2010**, 40(6)
7. Ayres, et al. *Br J Learn Disabil.* **2014**, 43
8. Davout, et al. *Clin Nutr.* **2016**, 35(4)

