# Differences and similarities in behavioural characteristics between children diagnosed with APD and children with SLI, dyslexia, ADHD or autism: A systematic review

E. de Wit<sup>1</sup>, P. van Dijk<sup>2</sup>, S. Hanekamp<sup>3</sup>, M. Visser-Bochane<sup>1</sup>, B. Steenbergen<sup>4, 5</sup>, C. van der Schans<sup>1, 6</sup>, & M. Luinge<sup>1, 2</sup>

- 1 Hanze University of Applied Sciences, Research Group Healthy Ageing, Allied Health Care and Nursing, Groningen, the Netherlands
- 2 University of Groningen, University Medical Center Groningen, Department of Otorhinolaryngology, Head & Neck Surgery, Groningen, the Netherlands
- 3 University of Groningen, University Medical Center Groningen, Laboratory for Experimental Ophthalmology, Groningen, the Netherlands
- 4 Radboud University Nijmegen, Behavioural Science Institute, Nijmegen, the Netherlands
- 5 Australian Catholic University, Melbourne, Australia
- 6 University of Groningen, University Medical Center Groningen, Department of Rehabilitation Medicine, Groningen, the Netherlands

# INTRODUCTION

- Children with suspected auditory processing disorders (APD) seem to have difficulties in auditory functioning, and with cognitive, language and reading tasks
- However, it is not clear whether the behavioural characteristics of children with APD are distinctive from the behavioural characteristics of children with specific language impairment (SLI), dyslexia, attention deficit hyperactivity disorder (ADHD), or autism spectrum disorder (ASD)

# **RESEARCH AIM**

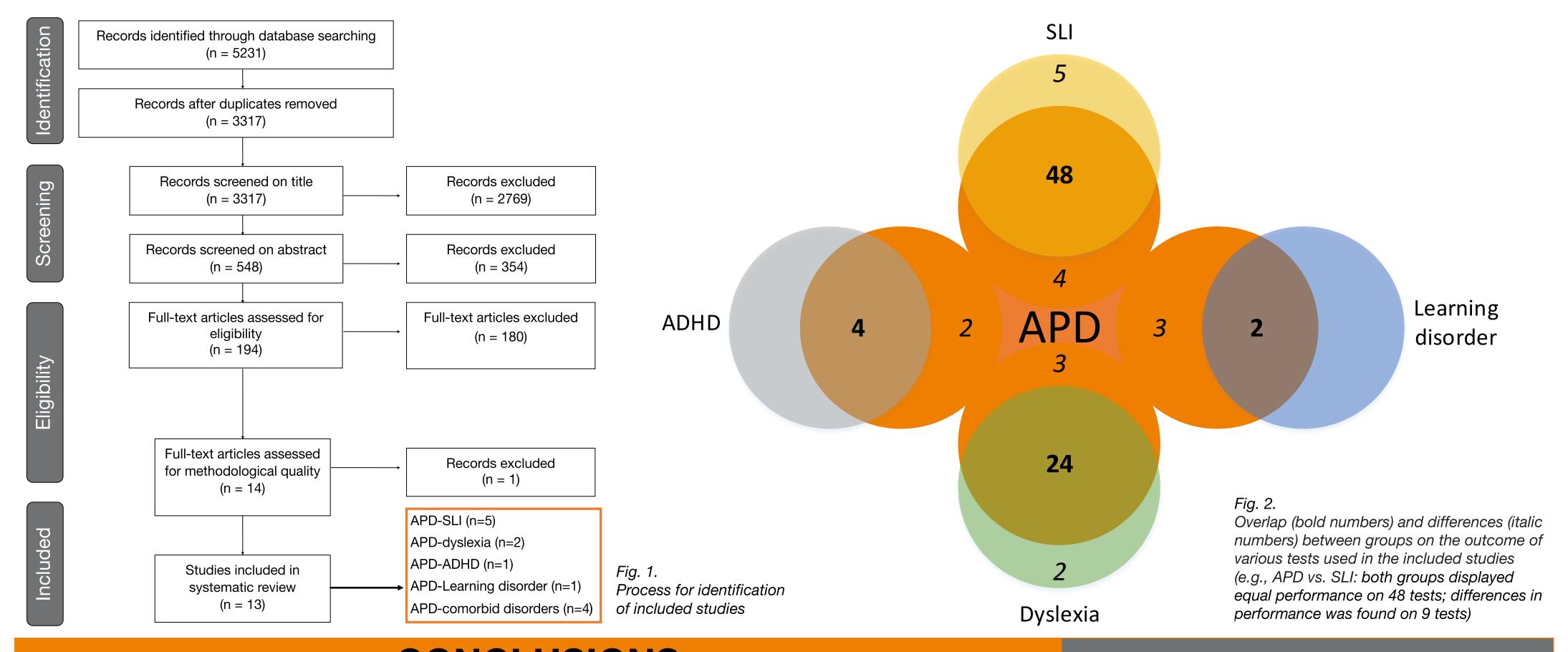
 To determine the overlap and differences in the reported behavioural characteristics of children with APD versus SLI, dyslexia, ADHD, and ASD

# **METHOD**

- Design: systematic review
- Peer-reviewed studies up to May 2015 reporting behaviours and/or performance of children with APD compared with that of children with another developmental disorder
- Searching six electronic databases: Pubmed, CINAHL, Eric, PsychINFO, Communication & Mass Media Complete, EMBASE
- Two researchers identified and screened the studies independently
- Methodological quality of the included studies was assessed by two reviewers with the ASHA's levels-ofevidence scheme

## RESULTS

- No studies were found in which children with APD were compared with children with ASD (see fig.1)
- No differences between APD versus SLI, dyslexia and ADHD are found in performance on cognitive (intelligence, memory, and attention) and language tests
- The reading skills of children with APD overlap with the reading skills of children with SLI
- Only minor differences were found between groups on auditory and visual tasks and parental questionnaires (see fig. 2)



# CONCLUSIONS

- The behavioural characteristics of children with APD overlap to a great extent with the behavioural characteristics of children with SLI, dyslexia, ADHD, and learning disorders
- As a consequence, healthcare professionals need to work multidisciplinary
- More research is needed to better understand the overlap and differences between children with various developmental disorders

Contact Information:

Ellen de Wit, MSc.

e.de.wit@pl.hanze.nl











