

aadpa **5TH ANNUAL**
ADHD
COMING
OF AGE **CONFERENCE**

SOFITEL WENTWORTH SYDNEY
30-31 JULY 2022

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PROGRAM

Subject to Change

SATURDAY 30 JULY

7:00 – 8:30am	Arrivals: Tea and coffee served in the foyer and Melbourne Room	
8:30 – 10:00am	Plenary 1: Perth/Sydney Rooms	Chair: Sally Poulton
	8:30am	Welcome to Country Welcome to Conference; Prof Mark Bellgrove
	9:00am	Attending to the needs of consumers with ADHD – biopsychosocial approaches for research & clinical practice; Assoc Prof Emma Sciberras
	9:30am	Florence Levy Award Winner
10:00 – 10:30am	Morning Tea & Networking Poster Exhibition: Melbourne Room (30 mins)	
10:30 – 12:00pm	Concurrent Sessions 1 & 2	
	Session 1: Perth Room	Session 2: Sydney Room
	Professionals living with ADHD	Prescribing for ADHD with co-morbidities
	Chair: John Kramer	Chair: Assoc. Prof. Tim Silk
	- Chris Soo, GP - Catherine O’Kane, ADHD Coach - Sarah Hoff, ADHD Coach - Mandira Hiremath, Paediatrician	- Co-Morbidities in Tourette Syndrome; Valsamma Eapen - Challenges of treating ADHD in children and adolescents with autism and/or intellectual disability; David Dossetor - I have ADHD and I use drugs – why won’t you help me?; Ed Ogden
12.00 – 1.00pm	Lunch & Networking: (60 mins) Poster Exhibition: Melbourne Room	
1:00 – 2:30pm	Session 3: Perth/Sydney Rooms	Chair: Prof. David Coghill
	ADHD Guidelines: Where The Evidence Leads	
	- Background, process & current stage; Prof Mark Bellgrove - Non-Pharmaceutical; Assoc Prof Emma Sciberras - Pharmaceutical; Dr Karuppiiah Jagadheesan - Consumer perspectives; Edwina Birch - Discussion on next steps/implementation; Prof Mark Bellgrove - Audience Q&A	
2:30 – 3:30pm	Afternoon Tea & Networking: (60 mins) Poster Exhibition: Melbourne Room	
3:30 – 4:30pm	Plenary 2: Perth/Sydney Rooms	Chair: Prof Christel Middeldorp
	Keynote: Creativity and other strengths associated with ADHD; Dr Martine Hoogman	
	Martine Hoogman is an assistant professor at the departments of psychiatry and human genetics of the Radboud University Medical Center, in Nijmegen, The Netherlands. After studying ADHD’s cognitive deficits for more than a decade, she is now leading a research group that has the aim to study positive aspects of strengths and resilience factors associated with neurodevelopmental disorders. She also leads the ENIGMA-ADHD working group, a worldwide collaboration aimed at unravelling the neurobiology of ADHD.	
4:30 – 5:30pm	AADPA AGM: Perth/Sydney Rooms (members only)	
5:30 – 7:30pm	Reception: Melbourne and Ballroom Foyer	

PROGRAM

Subject to Change

SUNDAY 31 JULY

7:00 – 8:30am

Arrivals (tea & coffee plus put up posters)

8:30 – 10:00am

Plenary 3: Perth/Sydney Rooms

Chair: Roger Paterson

8:30am Keynote: Normal aging or ADHD? How to manage ADHD in older adults; **Dr David W Goodman**

An internationally recognized expert, Dr Goodman has presented over 600 lectures to medical specialists and authored peer-reviewed scientific papers. He is Assistant Prof. of Psychiatry and Behavioral Sciences at Johns Hopkins University School of Medicine and Clinical Assoc. Prof. of Psychiatry and Behavioral Sciences at New York State University. He is Director of the Adult Attention Deficit Disorder Center of Maryland, Director of Suburban Psychiatric Associates LLC and serves on the executive committee of APSARD (American Professional Society for ADHD and Related Disorders).

9:30am Spectacular Cost of Failure to Diagnose and Treat ADHD; **Dr Dianne Grocott**

10:00 – 10:30am

Morning Tea & Networking

Poster Exhibition: Melbourne Room (30 mins)

10:30 – 12:00pm

Concurrent Sessions 4 & 5

Session 4: Perth Room

Practical tips & tools for non-pharmacological intervention

Chair: Assoc Prof. Emma Sciberras

- What underpins an ADHD diagnosis and the traits that erupt- The ADHD Volcano of Challenging Behaviours: **Monica Hassall**
- Increasing understanding using the hot and cold executive functioning framework: **Vanessa Petersen**
- Two quick analogies that can help parents to understand their role in supporting their child with ADHD.: **Lou Brown**
- A framework to help guide moment-to-moment parenting responses: **Maddi Derrick**
- Peer-Mediated Play-Based Intervention; Video-modelling interventions for children and adolescents with ADHD: **Sarah Wilkes-Gillan**
- The 'Goal, Plan, Do, Check' strategy for children with ADHD: **Lisa Vale**
- The 'Goal, Plan, Do, Check' strategy for children with ADHD: **Michele Toner**
- Working with procrastination in adults with ADHD: **Madeline O'Reilly**

Session 5: Sydney Room

Research in ADHD – Oral Presentations #1

Chair: May Su

- General practitioners' knowledge and attitudes towards attention deficit-hyperactivity disorder (ADHD); **Susie Kwon**
- "Stuck in a loop": A qualitative examination of challenges for children and adolescents with ADHD and anxiety; **Anna Jackson**
- Parental attributions of oppositional defiant disorder (ODD) behaviour; **Ryan Carter**
- "Doctor, My Medication Is Not Working"! ADHD Coming of Age in Covid-19 Pandemic Melbourne; **Jaya Reddy**
- Functioning of adolescents with subsyndromal ADHD; **Melissa Mulraney**
- Understanding functioning in adult ADHD: A qualitative study; **Sally Poulton**

12.00 – 1.00pm

Lunch & Networking: (60 mins)

Poster Exhibition: Melbourne Room

PROGRAM

Subject to Change

SUNDAY 31 JULY

1:00 – 2:30pm

Concurrent Sessions 6 & 7

Session 6: Sydney Room

How can allied health specialists help people with ADHD?

Chair: Sally Poulton

- John Kramer
- Rebecca Sutherland
- Sarah Wilkes-Gillan
- Maddi Derrick
- Michele Toner
- Vanessa Peterson

Session 7: Perth Room

Research in ADHD – Oral Presentations #2

Chair: Prof. Mark Bellgrove

- Subsyndromal ADHD and ADHD rates: A comparison of Australia and United States populations; **Yasemin Mehmed**
- The prevalence of ADHD in trans and gender diverse children; **Douglas Russell**
- Health service costs and productivity losses of Australian children and adolescents with ADHD symptoms; **Ha Le**
- ADHD Prescribing Trends in a Public Child and Youth Mental Health Service: Preliminary Findings from a Chart Review Study; **Daniel Sullivan**
- Can Neurocognitive Outcomes Assist Measurement-Based Care for Children with ADHD; **Seungjae (Jesse) Lee**
- Linking GWAS to pharmacological treatments for psychiatric disorders; **Aurina Arnatkeviciute**

2:30 – 3:00pm

Afternoon Tea & Networking: (30 mins)

Poster Exhibition: Melbourne Room

3:00 – 4:30pm

Plenary 4: Perth/Sydney Rooms

Panel Discussion: ADHD Coming of Age – discussion and call to action

Chair: Alyssa Weirman

- Patrick Concannon – ADHD Australia
- Edwina Birch – ADHD Foundation
- Doris Hopkins – Parents for ADHD Advocacy Australia
- Michele Toner – ADHD WA
- Peter Scholem – ADHD United
- Judith Bull – ADDults with ADHD
- Louise Kuchel – Square peg, round whole

4:30pm

Conference Close

POSTER EXHIBITIONS

Posters will be on display in the Melbourne Room

Poster	Name	Submission Title
1	Aurina Arnatkeviciute	Trans-ancestry genome wide association study of executive functions in up to 14 877 subjects
2	Caitlin Bishop	Practitioner Review: Psychoeducation and Attention-Deficit/Hyperactivity Disorder. A Systematic Review of the Literature
3	Donald Butler	Intuniv usefulness in a Paediatric Practice
4	Stanley Cheng	A rapid systematic review of attention-deficit/hyperactivity disorder (ADHD) and high order writing: current findings and implications for interventio
5	Christopher Hanbury-Brown	Exercise in Adults with Attention Deficit/Hyperactivity Disorder (ADHD): A Systematic Review
6	Ross Kirkman	Telehealth and Shared Care with GP's- the only way to treat ADHD for all
7	Louise Sealy	A delphi study exploring attitudes of medical professionals towards models of care for children with Attention Deficit Hyperactivity disorder (ADHD) in New South Wales (NSW), Australia
8	Louise Sealy	Models of Care for Children and Adolescents with Attention Deficit Hyperactivity Disorder
9	May Su	Bringing attention to inattention: ADHD from a General Practice Perspective
10	Rebecca Sutherland	Listening, hearing and ADHD in a reading difficulties clinic cohort
11	Lisa Vale	Evidence based paediatric occupational therapy practice for supporting children with ADHD and their families - a partnership approach
12	Sarah Wilkes-Gillan	A Pairwise Randomised Controlled Trial of a Peer-Mediated Play-Based Intervention to Improve the Social Play Skills of Children with ADHD: Outcomes of the Typically-Developing Playmates
13	Sarah Wilkes-Gillan	A systematic review of video-modelling interventions for children and adolescents with attention-deficit hyperactivity disorder
14	Sarah Wilkes-Gillan	The friendships of children and youth with attention-deficit hyperactivity disorder: A systematic review

ABSTRACTS

General practitioners' knowledge and attitudes towards attention deficit-hyperactivity disorder (ADHD)

Kwon, Susie (1); Kramer, John (2); Munoz, Anita (3); Bhurawala, Habib (1,5) and Poulton, Alison (1,4,5)

1. Department of Paediatrics, Nepean Hospital, Penrith, Australia
2. UNSW Rural Clinical School, Coffs Harbour, Australia
3. Mid-Town Medical Clinic General Practice, Melbourne, Australia
4. Brain Mind Centre Nepean, University of Sydney, Penrith, Australia
5. Sydney Medical School Nepean, Discipline of Paediatrics, The University of Sydney, NSW, Australia

Background and aims: The Henry Review of Health Services for Children, Young People and Families identified that new models of care were needed to increase the accessibility of treatment for ADHD in NSW. These models would include General Practitioner (GP) prescribing ADHD medication. This study aimed to evaluate GPs' knowledge of and attitudes towards ADHD and the potential role of the GP in ADHD management in the primary care setting.

Method: A confidential online survey of Australian GPs and GP registrars was conducted, with potential respondents contacted via email by the investigators from their practice, professional and personal lists, and contacts.

Results: Out of 230 respondents, 214 GPs and GP registrars submitted completed surveys that could be analysed. 97% believed ADHD was a genuine condition, with 88% specifying inattention as a primary symptom. More than 90% would take a history from the individual and another family member, including a developmental or employment history. 51% had seen and diagnosed ADHD within the past year. 42% had received no training in ADHD, and 92% felt that an assessment tool would be useful. Barriers to GP assessment included lack of time, knowledge, and lack of experience. When invited to comment on ADHD management, prevalent concerns were inadequate access to specialist treatment; 18 respondents spontaneously commented that GPs would be capable of managing ADHD albeit with adequate training; frustration was expressed about the restrictive prescribing regulations.

Conclusions: Among the survey respondents, there was a demonstrated enthusiasm in GPs taking on a greater role in managing children, adolescents and adults with ADHD. However, a need for specific training and education was highlighted to up-skill GPs in ADHD management, including pharmacotherapy. In addition, diagnostic tools and referral guidelines may assist GPs to streamline the care provided to these individuals.

Correspondence: Susie Kwon; Susie.Kwon@health.nsw.gov.au

"Stuck in a loop": A qualitative examination of challenges for children and adolescents with ADHD and anxiety

Jackson, Anna (1,2); Mulraney, Melissa (2,4,5); Melvin, Glenn A. (1); Evans, Subhadra (1); Efron, Daryl (2,3,4) and Sciberras, Emma (1,2,4)

1. Centre for Social and Early Emotional Development, Deakin University, Burwood, Victoria, Australia
2. Murdoch Children's Research Institute, Parkville, Victoria, Australia
3. The Royal Children's Hospital, Parkville, Victoria, Australia
4. Department of Paediatrics, University of Melbourne, Parkville, Victoria, Australia
5. Institute for Social Neuroscience, ISN Innovations, Ivanhoe, Victoria, Australia

Background and aims: It is widely accepted that children and adolescents (henceforth "children") with attention-deficit/hyperactivity disorder (ADHD) and anxiety experience greater difficulties in a range of areas compared to children with either ADHD or anxiety alone. Qualitative approaches can provide rich complementary insights by capturing great depth and detail, however, are yet to be utilised to examine challenges experienced by children with co-occurring ADHD and anxiety. Consumer perspectives are also lacking in studies of these difficulties. Gaining more detailed and precise information about the daily experiences of anxiety in children with ADHD, from family perspectives, was anticipated to contribute to a stronger empirical basis to inform tailored supports for this population. This study aimed to explore situations in which the anxiety of children with ADHD (aged 8-13 years) was problematic, according to their parents.

Method: Participants had been recruited previously for a large randomised controlled trial evaluating the effectiveness of an anxiety intervention for children with ADHD. Trial eligibility required children met diagnostic criteria for ADHD and ≥1 of separation, social and generalised anxiety disorders. At baseline, a measure of life interference due to the child's anxiety captured situations in which parents reported their child's anxiety to be problematic. Reflexive thematic analysis of the free-text responses (N = 203) was conducted to yield new insights by inductively generating themes, ensuring results reflect the perspectives of the families that interventions aim to support.

Results: Three overarching themes were generated, highlighting 1) the difficulties experienced with everyday situations and processes due to the child's anxiety, 2) the nature of the child's anxiety being pervasive and unrelenting, and 3) the substantial strain placed on the family system around the child, due to their anxiety.

Conclusions: This study contributes a richer understanding of the complex and challenging impacts of co-occurring ADHD and anxiety and may enhance understanding of the support needs of these children and their families. The results reiterate the need for clinicians working with children with ADHD to consider and identify co-occurring disorders, including anxiety, to enable targeted support. Recommendations also include screening for difficulties experienced by parents and siblings, and directing families to relevant supports.

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ABSTRACTS

Parental attributions of oppositional defiant disorder (ODD) behaviour

Carter, Ryan (1); Mason, Lynne (2) and Poulton, Alison (3)

1. School of Psychology, University of Sydney, Sydney, Australia
2. Child and Adolescent Development Unit, Blue Mountains District ANZAC Memorial Hospital, Katoomba, Australia
3. Brain Mind Centre Nepean, University of Sydney, Sydney, Australia

Background and aims: A wealth of research indicates that the way parents attribute the cause of child misbehaviour has a substantial impact on the parent-child relationship and the outcomes of behavioural interventions. Parents who regularly attribute responsibility to their child, are more likely to use harsher forms of discipline, such as spanking or lecturing, which may result in poorer child outcomes. The current study aimed to assess parental attributions of misbehaviour in parents of children diagnosed with ADHD and ODD. Utilising the Parent Cognition Scale (Snarr et al., 2009), we investigated the degree to which parents attributed misbehaviour as a controllable and intentional act.

Method: Participants were recruited advertisements across ADHD support websites and Facebook groups, where they could access a link to a survey that included demographic and diagnostic details and the Parent Cognition Scale. In addition, a DSM-5 based rating scale was included to screen for ODD.

Results: Of the children who screened positive for ODD, in more than half ODD was neither diagnosed nor suspected by the parent.
 1. Regardless of a formal diagnosis, parents of children who screened positively for ODD were more likely to attribute misbehaviour to intentional, controllable decisions by their child.

Conclusions:

1. Based upon the screening done using DSM-5 criteria in our sample, it appears that ODD may be under-diagnosed.
2. Making a formal diagnosis of ODD could be advantageous if it leads to therapy to promote greater parental understanding and empathy.

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"Doctor, My Medication Is Not Working"! ADHD Coming of Age in Covid-19 Pandemic Melbourne

Reddy, Jaya Prakash (1,2)

1. Private Psychiatrist: Albert Road Clinic, Melbourne
2. Fellow, Department of Psychiatry, University of Melbourne

Intended Audience:

General audience:

1. People with lived experience with ADHD and people caring for others with ADHD.
2. Professionals involved with the assessment and care of ADHD.

Summary of Content:

The author reflects on his experience of "ADHD Coming of Age" by describing his journey and practice as a psychiatrist in private practice conducting assessments for newly referred adult patients during the Covid-19 Pandemic lockdowns between March 2020 and November 2021 in Melbourne, the world's longest lockdown city.

The author had assessed and followed up a total of 220 new patients during this period, with 85 % of the total number of patients fulfilling criteria for ADHD. Of the subjects diagnosed to have ADHD, approximately 80 % of them fulfilled criteria for at least one other psychiatric comorbidity, including depressive, anxiety, binge eating disorders, post-traumatic stress disorder, and substance use disorders.

The author describes his practice and methodology of comprehensive bio-psycho-social assessments, incorporating a full chronological life history, leading to robust formulations of each person's predicament, and the impact of their executive functioning challenges on their quality of life during the worst of the Pandemic lockdowns.

The importance of the individual patient's lived experience narrative and their interpretation of the changes in their external and internal environment have been considered, as well as their relative cognitive strengths and resilience factors. Role transitions and the loss of learned coping strategies and lack of support structures during the Covid-19 lockdowns were hypothesized to have been precipitating factors for the exacerbation of ADHD dysfunction and co-morbidities.

Conclusion: The prolonged Covid Pandemic lockdowns proved to be a perpetuating factor for the persistence and/or exacerbation of ADHD executive function difficulties and comorbid mood/anxiety symptoms and increased impulsivity in a majority of the cohort followed-up by the author, thus inviting the relatively common concern from patients: "Doctor, my medication is not working!"

The importance of a robust formulation and elucidation of the individual lived experience narrative, is key to designing and tailoring effective interventions for each individual adult with ADHD. The author found that effective outcomes were achieved through incorporating medication and non-medication strategies whilst empowering, validating and advocating for each individual's ADHD life journey and current circumstances.

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ABSTRACTS

Functioning of adolescents with subsyndromal ADHD

Mulraney, Melissa (1,2,3); Zendarski, Nardia (1); Bui, Christy (1) and Coghill, David (2,3,4)

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4. Department of Psychiatry, University of Melbourne, Melbourne, Australia

Background and aims: Mounting evidence indicates that youth with elevated symptoms who do not meet full diagnostics criteria for ADHD experience a similar pattern of functional impairments to those with a full diagnosis. However, studies to date have largely examined this in clinical populations. The current study aimed to describe in the functioning of Australian adolescents with subsyndromal ADHD, compared to those with full threshold ADHD and non-ADHD controls. **Method:** Data were drawn from a nationally representative survey of Australian youth mental health (Young Minds Matter). Adolescents (11-17 years, $n = 2967$) completed surveys about their mental health, risk-taking behaviours, and wellbeing. Subsyndromal ADHD was defined as 3-5 symptoms of inattention or hyperactivity/impulsivity plus impaired functioning on the parent-reported Diagnostic Interview Schedule for Children-Version IV. Multinomial and linear regression analyses were used to compare functional outcomes between youth with subsyndromal ADHD, youth with ADHD, and non-ADHD controls.

Results: 620 adolescents (20.9%, $n=369$ male) met criteria for subsyndromal ADHD. Compared to non-ADHD youth, those with subsyndromal ADHD and ADHD had poorer academic functioning (ORs 1.5-5.4), increased rates of psychiatric comorbidities (ORs 1.4-36.8), and increase odds of being bullied (ORs 1.6-2.9). Youth with ADHD had poorer academic functioning and higher rates of conduct disorder than those with subsyndromal ADHD, however, there were no differences on any other outcomes between these groups.

Conclusions: Approximately one in five Australian adolescents are experiencing elevated symptoms of ADHD and associated impairments, and this presentation puts youth at a similarly high risk for a range of adverse functional outcomes as those with ADHD. This is particularly concerning given this a group of young people who are unlikely to be accessing services and results held after accounting for the impact of age, sex, and comorbidities.

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Understanding functioning in adult ADHD: A qualitative study

Babajanyan, Diana (1) and Poulton, Alison (2)

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2. Brain Mind Centre Nepean, University of Sydney, Sydney, Australia

Background and aims: In the DSM-5, ADHD diagnostic criteria are based on the reported symptoms and behavioural outcomes of cognitive processes. Clinicians use the same diagnostic criteria for both the self-report and observer report to evaluate an individual for ADHD. This study aimed to investigate the cognitive processes of ADHD and how they impact functioning in affected adults. Such an understanding could instigate more specific diagnostic methodology emphasising the function of attentional deficits in producing ADHD symptoms.

Method: A workshop organised with an ADHD community organisation (ADDults with ADHD) was conducted in Sydney, Australia. Descriptions of attention during cognitively demanding tasks were sought from attendees. Qualitative responses from 29 participants and 24 additional survey responses were analysed thematically.

Results: Participants tended to describe two patterns of attentional dysfunction: 1) not attending to any stimuli and losing track of time, and 2) attending to multiple stimuli (tasks or distractions) simultaneously or in rapid succession, but not finishing any tasks. Several participants employed extra activities as mental stimulation, which allowed them to keep their mind working on another task, however, the majority of participants identified employing extra activities maladaptively, for procrastination and task avoidance. Estimated attention span of participants varied from a few seconds to 15 minutes. Finally, participants described using interest or stress to maintain engagement, the extremes of which could sometimes lead to hyperfocusing, which could be greatly productive.

Conclusions: This study described the common experiences in attention patterns of adults with ADHD. Such descriptions of common, disorder-specific experiences may represent fundamental characteristics of the condition which can have more informative and specific diagnostic value, as opposed to behavioural outcomes that may be observed by an acquaintance, family member or colleague.

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ABSTRACTS

Subsyndromal ADHD and ADHD rates: A comparison of Australia and United States populations.

Mehmed, Yasemin (1,2,3); Mulraney, Melissa (1,2,3); Payne, Jonathan (1,2, 3) and Coghill, David (1,2,3)

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3. The Royal Children's Hospital, VIC, Australia

Background and aims: ADHD is commonly associated with impairment across multiple domains of functioning. Increasing evidence suggests that children experiencing symptoms of ADHD, but not meeting the full diagnostic criteria for ADHD, also experience significant impairment. Research is however lacking in how subsyndromal ADHD compares to full threshold ADHD. This research will aim to compare the identification of subsyndromal ADHD and full threshold ADHD in representative Australian and United States population samples.

Method: Data from the 2nd Young Minds Matter (YMM) survey (N = 6310) in Australian children and adolescents aged 4 to 17 years old was compared to baseline data from the Adolescent Brain Cognitive Development (ABCD) study of children (N = 11878) aged 9 to 10 in the United States (US). The Diagnostic Interview Schedule for Children Version IV (DISC-IV) and Kiddie Schedule for Affective Disorders and Schizophrenia 5 (KSADS-5) were used to diagnose children with ADHD in the YMM and ABCD study respectively. Subsyndromal ADHD in both cohorts was defined as the presence of between 3 and 5 inattentive and/or hyperactive/impulsive symptoms plus associated impairment.

Results: While the prevalence of full threshold ADHD was similar in both samples (YMM, 11.7%; ABCD 9%), a higher proportion of children met criteria for subsyndromal ADHD in YMM (9.6%) compared to ABCD (2.5%). Looking deeper into the data with respect to the presence of symptoms, without considering impairment, YMM reported a higher proportion with subsyndromal symptoms compared to the ABCD study on both inattentive symptoms (14.2% compared to 3.6%) and hyperactive/impulsive symptoms (12.2% compared to 4.4%). When considering the total number of symptoms there were clear differences in distribution. Compared to ABCD a higher proportion of participants in YMM were identified as having between 1 and 18 symptoms while a higher proportion of the ABCD participants were rated as having no symptoms (85.2%) compared to YMM (42.3%).

Conclusions: When comparing Australian and US population samples, it appears that rates of subsyndromal ADHD are higher in Australia. We will discuss potential reasons for these differences and the implication of these findings for research that uses data from international studies. Potential explanations include conceptual differences between the different countries and the use of different raters (interviewers vs parental report) to assess symptoms and impairment.

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The prevalence of ADHD in trans and gender-diverse children.

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Background and aims: Research into the mental health of trans youth has consistently found concerning levels of internalising mental health issues. Only recently have externalising mental health issues and neurobehavioural conditions been investigated in this population. Moreover, much of the research on mental health in young trans populations has focused either on adolescents attending specialist gender clinics or community-based convenience samples. To address these shortcomings, the aim of this study was to compare the prevalence of externalising mental health issues and neurodevelopmental conditions in cis- and transgender children, in a representative US sample, using the Adolescent Brain Cognitive Development (ABCD) Study.

Method: Using propensity-weighted baseline data, we compared the proportion of trans (n = 58) and cisgender (n = 7,111) children aged 9 and 10 years old, who were in the borderline/clinical range in three DSM-oriented scales (ADHD problems, oppositional defiance, and conduct problems) measured via the parent-reported Child Behaviour Checklist. Standardised scores and clinical cut-offs were used as a measure of each of the six mental health areas.

Results: Trans children had higher proportions of clinical and preclinical levels in all three of the mental health areas measured: ADHD problems (6% vs 10%; OR 1.57 95% CI 0.50 to 4.91), oppositional defiance (6% vs 14%; OR 2.39 95% CI 0.85 to 6.77) conduct problems (7% vs 18%; OR 3.13 95% CI 1.46 to 6.71). While the findings show more trans children are in the borderline/clinical range than their cisgender peers across each of these areas, there is not sufficient evidence, as shown in this data, to be confident about whether these represent a true increase for oppositional defiance and ADHD problems.

Conclusions: Our study shows increased levels of conduct problems, and trends towards increased levels of ADHD problems and oppositional defiance. The lack of evidence in relation to ADHD and oppositional defiance may be due to the relatively small number of trans-identifying children in the sample. This is likely a reflection of the age of the sample when the data were collected. However, this is a longitudinal study, and we anticipate that the proportion of children identifying as trans will increase over time and we plan to repeat these analyses with data at future time points to better understand the level of these problems and conditions in trans adolescents.

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ABSTRACTS

Health service costs and productivity losses of Australian children and adolescents with ADHD symptoms

Le, N.D. Ha (1); Sciberras, Emma (1,2); Hiscock, Harriet (2,3); Coghill, David (2,3); Orellana, Liliana (1) and Gold, Lisa (1)

1. Faculty of Health, Deakin University, Geelong, Australia
2. Murdoch Children's Research Institute, Royal Children's Hospital, Australia
3. Department of Paediatrics, Faculty of Medicine, The University of Melbourne, Australia

Background: Attention deficit hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder. While the social-emotional, and academic impacts of ADHD are well documented, less is known about the economic impacts of ADHD.

Aims: To explore, in children aged 4–19 years, associations between ADHD symptoms and (1) healthcare costs and (2) productivity losses; as well as (3) factors contributing to these associations.

Methods: Data were drawn from the Longitudinal Study of Australian Children (LSAC). ADHD symptoms were measured using the 5 hyperactivity scale questions from the Strengths and Difficulties Questionnaire from 4–17 years. ADHD symptoms were defined using the standard cut off (score > 8). Medicare data (both medical and pharmaceutical services) were used to estimate healthcare costs to government from 4 to 19 years. Child school absenteeism was used to estimate productivity losses. Multivariate linear regression and mixed effect modelling were used to analyse the associations between healthcare/productivity costs and ADHD symptoms between child aged 4 and 19 years, adjusting for child and family demographic factors.

Results: Compared to those with no ADHD symptoms, children with ADHD symptoms had higher healthcare costs and productivity losses at 4–5 and 8–13 years. Considering the repeated measures, the mixed model showed that children with ADHD symptoms incurred higher healthcare costs to government (mean difference= \$225, 95% CI \$90 to \$360 over two-year period) and higher productivity losses (mean difference= \$453, 95% CI -\$830 to \$1735 over two years). Families socioeconomic position and child internalising/externalising symptoms were associated with higher healthcare and productivity costs. Families from regional/remote areas had lower healthcare costs than those from metropolitan areas.

Conclusion: ADHD symptoms are associated with higher healthcare costs to government and productivity losses in early childhood and early adolescent periods. Children living in rural/remote areas may be missing care. Targeting supports to at risk groups such as children living with co-morbid mental health problems or in more disadvantaged or rural areas, could help to reduce the economic burden of ADHD in the longer term.

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ADHD Prescribing Trends in a Public Child and Youth Mental Health Service: Preliminary Findings from a Chart Review Study

Middeldorp, Christel M. (1,2); Payne, Leanne (1,2); Bellgrove, Mark A. (3); Sciberras, Emma (4); Coghill, David R. (5) and Sullivan, Daniel P. (1,2)

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2. Child Health Research Centre, The University of Queensland, Brisbane, Australia
3. Turner Institute for Brain and Mental Health, School of Psychological Sciences, Monash University, Australia
4. School of Psychology, Deakin University, Australia
5. Department of Paediatrics and Psychiatry, University of Melbourne, Australia

Background and aims: A previous study by our group found that young people with ADHD attending Child and Youth Mental Health Services (CYMHS) in Brisbane, Queensland did not clinically improve to the same extent as children with emotional disorders. Given ADHD medications are known to be effective in clinical trials, and that clinical practice guidelines (such as the NICE guideline) exist, it is necessary to examine the course of treatment received by these children in the public mental health system.

Method: This paper presents findings of a treatment case review of young people attending public Child and Youth Mental Health Services in Brisbane, Queensland whom had a diagnosis of ADHD recorded in their electronic medical record.

Results: Preliminary results of 39 charts of children diagnosed with ADHD at some point during the treatment in CYMHS indicated that in 12.8% of the cohort the diagnosis of ADHD was rejected, sometimes following diagnostic clarification (e.g., trauma). A third had been prescribed methylphenidate prior to entering CYMHS. In nearly half of the cases reviewed, methylphenidate was initiated during treatment in CYMHS. Chart reviewers determined that in 10% of cases, the NICE guidelines were not followed without sufficient justification.

Conclusions: Preliminary data from these cases reveals that diagnoses of ADHD are sometimes revoked by CYMHS, and that the first-line medication, methylphenidate, is frequently prescribed or continued, but not in all children. In a tenth of cases, the NICE guidelines were not followed with respect to the ADHD medications trialled.

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ABSTRACTS

Can Neurocognitive Outcomes Assist Measurement-Based Care for Children with Attention-Deficit/Hyperactivity Disorder?

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Background and aims: Attention-deficit/hyperactivity disorder (ADHD) is one of the most common neurodevelopmental conditions among school-age children. Early intervention and ongoing evaluation of treatment effectiveness are essential to minimise the life-long negative impact of ADHD. Neurocognitive functions have been reported to improve with pharmacological and cognitive training interventions for children with ADHD. We evaluated value of measuring change in neurocognitive functions following ADHD interventions as a treatment outcome.

Methods: We systematically reviewed randomised control trials of two distinctive types of ADHD interventions – pharmacological treatments and cognitive training – and summarised the changes in neurocognitive and clinical outcomes using a series of meta-analyses.

Results: Both pharmacological and cognitive training interventions showed positive effects on some aspects of neurocognitive functions. However, there were no significant correlations between changes in neurocognitive function (e.g., inhibition) and changes in ADHD behavioural symptoms (e.g., impulsive behaviour).

Conclusions: While the associations between changes in neurocognitive function and clinical outcomes are not well studied, based on current findings, it is not suitable to use change in neurocognitive outcomes as a proxy for change in ADHD clinical symptom-based outcomes. There is, however, notable value in monitoring changes in neurocognitive function associated with ADHD interventions to achieve the following aims: 1) understanding full treatment effect on children with ADHD, 2) identifying ancillary indicators of subclinical changes, and 3) provision of objective and less biased measures of treatment effects. These findings are important evidence that changes in neurocognitive function could be a co-occurring objective indication that parallels the clinical effects of ADHD treatments.

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Linking GWAS to pharmacological treatments for psychiatric disorders

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Large-scale genome-wide association studies (GWAS) can identify disease-associated genetic variations raising the question of how the GWAS-derived genetic variants underlying risk for psychiatric disorders relate to their pharmacological treatments. Here we introduce new methods to evaluate whether genes implicated by GWAS for psychiatric disorders are related to the gene targets of their pharmacological treatments focusing on four psychiatric disorders—ADHD, schizophrenia, bipolar disorder, and major depression—and using type 2 diabetes as a benchmark for comparison.

For each disorder we constructed two sets of scores for 2155 genes identified as targets for all approved treatments in the DrugBank database. The first score quantified the involvement of each gene as a treatment target for that disorder. The second score quantified gene similarity to significant GWAS variants according to a range of bioinformatic datasets including: i) positional mapping, where each gene is assigned a score based on the effects of SNPs that directly map to that gene; ii) protein interaction (PPI) network, where the mapping is expanded to genes that demonstrate close interactions through the PPI; iii) brain eQTLs, where higher scores are given to genes whose expression is influenced by SNPs implicated in GWAS; and iv) regional gene expression derived from the Allen Human Brain Atlas such that gene scores are proportional to spatial gene expression similarity to GWAS-implicated genes. Using those scores, we investigated which disorders and mapping methods demonstrated significant correspondence between treatment targets and genes implicated by GWAS compared to random treatments.

We found that the overall correspondence between treatment targets and GWAS-implicated genes in psychiatric disorders rarely exceeds null expectations but incorporating biologically relevant information in some cases can reveal meaningful links. For example, PPI and regional gene expression-based GWAS scores for bipolar disorder showed significant correspondence to their respective treatments; significant correspondence was also identified for diabetes using PPI-based measures. Critically, none of the mapping methods demonstrated significant correspondence for ADHD, major depression and schizophrenia suggesting that current treatments do not strongly match the genetic origins of those disorders indicating that new approaches for understanding and treating psychiatric disorders may be required.

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ABSTRACTS

Trans-ancestry genome wide association study of executive functions in up to 14 877 subjects

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Deficits in effective executive function, including inhibitory control and response variability are associated with risk for a number of psychiatric disorders including ADHD. To identify the common genetic variation associated with executive functions in the general population we performed the first trans-ancestry genome wide association study (GWAS) using behavioural traits derived from the stop-signal reaction time task, namely – go reaction time (GoRT), go reaction time variability (GoRT SD) and stop signal reaction time (SSRT) representing processing speed, response variability, and response inhibition, respectively.

The total sample comprised data from up to 14 877 subjects, derived from 8 sites and four ancestries [12 392 European (EUR), 1 238 East Asian (EAS), 466 South Asian (SAS) and 781 African (AFR)]. GWAS within each site and ancestral group were performed separately using linear mixed models implemented in GEMMA. Summary statistics were then combined using trans-ethnic meta-analysis implemented in MR-MEGA. We also assessed SNP heritability using LD score regression and constructed ADHD polygenic risk scores (PRS) in each EUR ancestry sample using PRSice to evaluate the associations with our measures.

No associations reaching genome wide significance ($p < 5 \times 10^{-8}$) for any of the three traits were detected. We found that GoRT SD and SSRT, had significant and similar SNP heritability of 8.2% ($p = 0.002$ and $p = 0.004$ respectively). ADHD PRS were significantly associated with the reaction time variability ($r = 0.0074$; $se = 0.0021$, $p = 0.0003$). Power analysis showed that our sample had excellent power ($> 80\%$) to detect at least one association at genome-wide significance if the number of common causal variants explaining 8% heritability was ≤ 500 , therefore, it is likely that the number of contributing variants is much larger.

Significant and consistent heritability identified for SSRT and reaction time variability indicates that interindividual differences in both the inhibitory control and the efficiency of cognitive control are influenced by genetic factors. The lack of significant GWAS associations shows that the number of common causal variants contributing to the heritability of these phenotypes is relatively high and larger sample sizes are necessary to robustly identify associations. The significant association between ADHD PGRS and reaction time variability supports its suggested utility as an endophenotype for ADHD.

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Practitioner Review: Psychoeducation and Attention-Deficit/Hyperactivity Disorder. A Systematic Review of the Literature

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3. Curtin University, WA, Australia
4. Hobart ADHD Consultants, TAS, Australia

Intended audience: Generalist – any clinicians, researchers and consumers.

Summary of content:

- Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that affects approximately 5% of the population.
- International guidelines, including NICE (2018) and the Australian ADHD guidelines (2022) reference the importance of psychoeducation and outline that the objectives are to 1) understand symptoms, 2) reduce stigma, 3) promote understanding and support across numerous settings (e.g. education, employment) and 4) to increase self-understanding. It is clear that this is needed for the individual with ADHD, their carers, and also for key supports in education settings and workplaces.
- Both consumers and carers have highlighted the importance of reliable and tailored information at the point of diagnosis, and ongoing throughout their care. This is particularly pertinent for ADHD, a lifetime neurodevelopmental disorder where the symptoms and impacts on daily life are likely to change over time.
- We are in the process of completing a practitioner review which aims to characterise the types of psychoeducation interventions that are utilised amongst individuals with ADHD. In addition we are interested in understanding how individuals are accessing health information regarding ADHD (e.g. clinicians, websites, podcasts, books).
- As part of this practitioner review, we are completing a systematic review of the literature and this will be registered with PROSPERO. We will be adopting a broad search strategy that encompasses psychoeducation, but also health literacy and education more broadly. We are interested in understanding what methods consumers or carers are using to access information about ADHD, and what types of information is provided through these mediums.

Conclusions: As the systematic review is yet to be completed we do not have specific conclusions. We anticipate that the discussion and directions for future research will be focussed on ways to improve the content and delivery of psychoeducation for individuals with ADHD.

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ABSTRACTS

Intuniv usefulness in a Paediatric practice

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Background and Aims: Intuniv is a recently available ADHD medication in Australia, but there are no specific guidelines on what subgroup of patients it is most useful.

The study's aim was to quantify Intuniv's usefulness, the types of behaviour for which it is most effective and optimal dosage. This is an retrospective uncontrolled study in a busy paediatric practice.

Method: Every patient prescribed Intuniv was recorded from June 2019 to January 2022. Included was the reason Intuniv was added to the current medications, the dose given or titrated to, and the outcome. Only the presenting difficulty was registered as the reason for starting Intuniv. A scale of -2 to +3 was used. Simple analysis compared percentage of each group, age when started and dosage. The scaling was based on asking the parent if they thought the medication was helping.

A total of 194 patients enrolled, being all patients prescribed Intuniv. Forty-two, 22% excluded from analysis.

Results: The reason and number for each group were Aggression 67, ASD 22, Hyperactivity 21, Anxiety 18, poor short term memory 16, difficult waking behaviour 13, OCD 11, Impulsivity 8, TICs 7, explosive episodes 6, meltdowns 6.

Aggression was the most common reason with good outcomes. For ASD it was less effective and more patients than for other groups had negative outcomes. A definite improvement with outcome scores 2 and 3, was seen in 58% of patients and another 19% probable with outcome score 1. Only 5% had negative outcomes none of which was serious.

For aggression Intuniv was started in a younger age group. The dosage for this group was the highest.

Discussion: Patients who are persistently overstimulated with poor cognitive/top-down control of their behaviour gain most benefit from Intuniv. Previous placebo double blinded controlled studies have shown the effectiveness of Intuniv for treating oppositional behaviour. This study confirms these findings in clinical practice.

This study shows the potential usefulness of Intuniv in a typical practice. Apart from oppositional behaviours it helped with hyperactivity, anxiety, poor working memory, difficult waking behaviour, OCD, and TICs. It also highlights the importance of titrating dosage, often to the highest recommended dosage until a therapeutic result is achieved.

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A rapid systematic review of attention-deficit/hyperactivity disorder (ADHD) and high order writing: current findings and implications for intervention

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Background and aims: Theoretical writing models and empirical studies have suggested a possible strong association between attention-deficit/hyperactivity disorder (ADHD) and high-order writing (e.g., planning, text production, and revising). A rapid systematic review was conducted to examine this relationship with the aim of informing writing interventions specific to the ADHD population.

Method: A systematic search for empirical studies on ADHD and high-order writing performance from the last two decades identified 18 eligible studies.

Results: Most studies showed that, compared to their peers, students with ADHD have more significant difficulties in high-order writing performance. Writing quality and writing process (e.g., planning and editing) were identified as a challenge for ADHD students and may be more challenging than writing productivity and meta-cognitive knowledge of writing. Individuals' inattention, short-term memory, working memory, executive functions, reading, oral language skills, and externalising behavioural problems were identified as significant predictors of high order writing performance.

Conclusions: The findings support theoretical writing models that propose writing as a complex process influenced by multiple cognitive factors, which are commonly impaired in individuals with ADHD. Interventions specific to the identified problems are discussed. The research has been peer-reviewed and published at Research in Developmental Disabilities 123 (February, 2022). <https://doi.org/10.1016/j.ridd.2022.104180>

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ABSTRACTS

Exercise in Adults with Attention Deficit/Hyperactivity Disorder (ADHD): A Systematic Review

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Background and aims: Approximately 4% of Australian adults have ADHD. Exercise improves symptoms in children/adolescents with ADHD. However, there are no systematic reviews of exercise in adults with ADHD.

Method: We searched 15 databases for acute or chronic exercise studies of any experimental design in adults with ADHD from inception until 27 Aug 2020; updated 18 March 2022. Risk of bias was assessed using the Cochrane Risk of Bias Tool 2 and Risk of Bias in Non-Randomised Studies-of Interventions.

Results:

- Among 22088 records identified, 17 studies were eligible, and data were available for 16 (11 acute exercise interventions; 5 training studies of 6 to 13 wks; 11 NRCTs and 5 RCTs). All had a moderate to high risk of bias. Acute exercise modalities included 10-30 mins of moderate intensity aerobic exercise (n=8), sprint interval training (n=1), and high intensity resistance exercise (n=2). Ten acute studies measured cognition (attention, inhibition, processing speed, and/or reaction time), with 7 reporting significant improvements in at least one cognitive outcome. Effect sizes ranged from negligible to large (g=0.02 to 0.83).
- None of the 3 training studies comparing 5 modalities of exercise [tai chi, kickboxing, yoga, or coordination training (n=2)] to an inactive comparison group and measuring cognition reported significant improvements (g=0.02-1.58). Two training studies compared exercise to an active control group for cognitive outcomes, showing no difference between tai chi and kickboxing (p>0.05) and a trend for higher intensity aerobic exercise to be better than lower intensity (p=0.083). Overall, few cognitive outcomes improved significantly (14/55 in acute studies; 0/29 in training studies).
- ADHD symptoms were measured in 2/5 training studies. Both aerobic exercise and methylphenidate + psychoeducation significantly improved ADHD symptoms (g=0.94 and 1.33, respectively), with a trend for greater improvement in the non-exercise group (p=0.06, g=0.43). By contrast, neither tai chi (g=0.07) nor kickboxing (g=0.06) were effective when directly compared to each other nor to an inactive control.

Conclusions: The adult ADHD and exercise literature is small, heterogeneous, and subject to bias. Acute exercise may improve cognitive outcomes in adults with ADHD. However, more robust research is needed before any conclusions can be made regarding the efficacy of exercise for any outcomes in adults with ADHD.

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Telehealth and Shared Care with GP's- the only way to treat ADHD for all

Kirkman, Ross (1)
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Intended Audience: Psychiatrists, Psychologists, GP's and consumers

Summary: Telehealth enables psychiatrists and psychologist to see patients throughout Australia. I have used Telehealth exclusively for 10 years in a shared care model with referring GP's. I work from home but cover all of Tasmania with the patient linking on their own device. It is not possible for patients in rural Australia to get treated unless via Telehealth. Shared care results in GP's being confident in prescribing and titrating stimulant medications and increases their skill in recognising ADHD in their own patients.

Conclusion: Telehealth should become the preferred means of providing diagnosis and treatment of ADHD for patients throughout Australia.

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ABSTRACTS

Bringing attention to inattention: ADHD from a General Practice Perspective

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5. South East Regional Hospital
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8. Beach Street Family Practice, Woolgoolga, NSW, Australia

Intended audience: This would suit oral presentation. We request additional time for presentation (30 min) given the complexity of topic. We would view this presentation of interest to General Practitioners, and health professionals and community living and working with ADHD.

Summary of content:

- ADHD is a prevalent condition, affecting approximately 5% of the population, with significant social and economic costs at individual and population level.
- Most Australians will attend a General Practitioner, 85% of the Australian general population attending within 12 months. The most prevalent presentation at General Practice is for mental health.
- ADHD is present in childhood, often affects individuals into adulthood, and can be inheritable. Comorbidity is common. General Practitioners provide generalist care along the whole lifespan, and often inter-generationally, which can place them uniquely in insight but also provide challenge in navigating this.
- Coming of age... The Henry Report has made recommendations regarding the current system of ADHD assessment and management within Australia, including regarding the role of General Practitioners. We recognize that any system of care for ADHD should be inter-professional and collaborative. General Practitioners may find themselves filling gaps where access may be challenging, or diversify into leadership positions within their community. We will provide two examples of this. The first being a pilot project with schools, and the second example of shared care model(s) including psychostimulant prescribing.

Conclusions: This presentation is intended to highlight the usual presentations for ADHD within General Practice, and also scope for community and specialist collaboration.

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Listening, hearing and ADHD in a reading difficulties clinic cohort

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Background and aims: Reading difficulties among primary school aged children are common and the impacts of poor reading can be lifelong. The causes are many, and include language and attention difficulties. Difficulties with hearing and listening skills can also impact on developing literacy skills. While hearing is screened in newborns in Australia, children do not routinely receive hearing checks before or during their school years. This study reports on tests of hearing and listening, along with ADHD diagnoses, for children with reading difficulties attending a multidisciplinary assessment service.

Methods: Methods: All children seen between July 2020 and March 2022 underwent 2 assessments – Sound Scouts, a hearing test app for children aged 5 years+ (incorporating tests of speech in quiet, speech in noise and tones in noise), followed by formal diagnostic audiological assessment (pure-tone audiometry, tympanometry and otoacoustic emissions). Information about cognitive and language skills was gained through standardised testing, along with information resulting in or confirming diagnoses of other conditions, including ADHD, autism and anxiety.

Results: Of the 39 children assessed, two children (5%) were found to have hearing loss confirmed on audiometry. However, 30 (81%) children scored below the average score (100) on their Sound Scouts assessment and 12 children were below the pass score of 80 (32%). All but two (95%) of the children referred for reading difficulties assessment had, or received a diagnosis of ADHD (9 prior diagnoses all on medication; 27 new diagnoses). Of the 12 children who failed the Sound Scouts assessment (scored below 80), 11 were found to have ADHD that was previously unrecognised and untreated (92%), one child had a prior diagnosis (treated). Nineteen children scored between 80 (pass) and 100 (average); of these, 2 had no ADHD, 3 had ADHD (treated), 14 (74%) had new diagnoses of ADHD (untreated). Among those scoring >100 (n=8), 5 had prior diagnosis (treated), 3 had new diagnoses (untreated, 38%).

Conclusions: Hearing loss can play a role in reading difficulties; children with academic concerns should be screened. Moreover, the impact of attention difficulties, and particularly unrecognised and unmanaged ADHD, can impact significantly on listening tasks providing further barriers to learning to read. Further investigation is planned to determine the role of stimulant medication on listening performance.

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ABSTRACTS

A delphi study exploring attitudes of medical professionals towards models of care for children with Attention Deficit Hyperactivity disorder (ADHD) in New South Wales (NSW), Australia.

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Background and aims: The current prevalent model of care in Australia for management of ADHD in children is specialist centric despite a strong international evidence base for alternative models, including integrated or shared-care with primary care practitioners and/or clinical nurse consultants. The 2020 Review of health services for children, young people and families within the NSW Health system, known as the "Henry Review" has highlighted the urgent need to review models of care of ADHD management, including how medication for ADHD is prescribed and monitored in NSW. The aim of this study is to explore attitudes of medical professionals and to achieve consensus regarding a model of care for the diagnosis and management of ADHD for children in NSW to improve equitable access to care whilst delivering safe, high-quality clinical standards.

Method: The study will be an online, anonymised three round Delphi survey of Paediatricians, Psychiatrists, and General Practitioners working in public and private sectors in remote, regional, and metropolitan areas in New South Wales. Participants will be recruited via professional organisations and public paediatric health services across NSW. Questions will be identified through a literature review and recommendations from a recent review of health services for children, young people and families within the NSW Health system. There will be three rounds of questions with the aim of meeting a consensus on a model/models of care by the end of round three.

Results: Results will be used to develop a series of consensus statements by medical professionals regarding a model of care to improve access to diagnosis and management of children with ADHD in NSW.

Conclusions: This study will provide valuable insight into the attitudes of medical professionals towards models of care for children with ADHD in NSW.

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Models of Care for Children and Adolescents with Attention Deficit Hyperactivity Disorder: A Systematic Review

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10. University of Melbourne, Departments of Paediatrics and Psychiatry, Melbourne, VIC, Australia
11. Australian ADHD Professionals Association, Melbourne, VIC, Australia

Background and Aims: To describe the current models of care in the management of ADHD for children and adolescents, and identify the key components in an ideal model of care.

Methods: 4 databases were searched for papers with publication date up till 4 March 2021 that examined paediatric ADHD patients exposed to a model of care.

Results: 76 studies were identified, including 7 systematic reviews and 9 RCTs. 18 unique models of care were identified, involving service provision by a range of multidisciplinary providers. Key intervention components for integrated models of care included protocol driven care, treatment to target approaches, robust interdisciplinary educational resources, wraparound care coordination and technological innovation. Although RCT level evidence is scarce, previously published studies support the notion that integrated care is feasible and effective.

Conclusions: Implementation of integrated models of care in the context of ADHD may address critical access shortage whilst maintaining quality of care. However, a limited number of high-quality controlled studies have examined this to date, and few have examined economic impacts.

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ABSTRACTS

Evidence-based paediatric occupational therapy practice for supporting children with ADHD and their families – a partnership approach

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Intended audience: Allied Health Professionals, Educators, Research translators

Summary of content

- Occupational Therapists (OTs) are allied health professionals who support people to participate in their everyday occupations. For children, these occupations are play, productivity and self-care which occur across different environments of home, childcare/kinder/school and the community.
- ADHD symptoms can significantly impact a child's ability to function in these different environments across their everyday occupations.
- Within a private practice setting in Melbourne, it was identified that there was a need for clinician training to provide therapy supports to children with ADHD or those with dual diagnoses (most commonly ADHD and Autism Spectrum Disorder) and their families.
- There was a current lack of specific OT ADHD research and evidence based OT professional development to guide OT practice.
- To address this gap, a partnership was formed with a researcher in OT and the private practice team, under the practice's model of an expert Clinical Advisory Panel Program.
- Over 12 months, 3 professional development sessions were designed for the clinicians by the research OT where 1) the core features of ADHD and the OT role in supporting these was explained, 2) the evidence-base of current psychosocial interventions as applied to OT practice and intervention were reviewed and discussed and 3) where therapists applied strategies from existing evidence-based approaches in their sessions and shared their case studies with video of their session for group review, feedback and discussion.
- The professional development focussed on providing intervention that supported the child/family through the specific OT areas of focus between the person (child/parent), the occupation and the environment in which it takes place.
- The OT intervention focussed on identifying where the child /family occupational performance is breaking down and where it is successful, and then having options of specific OT strategies to develop skills, adjust the occupation and / or modify the environment.
- The content taught by the research OT was then reinforced through internal supervision within the practice and future sessions are planned for across 2022.

Conclusions

- This partnership enhanced evidence-based practice by enabling therapists to understand and incorporate the most up to date evidence in emerging areas of research.
- This partnership strengthens research translation through links between university academics and practising clinicians
- This partnership developed clinicians' knowledge of ADHD, which enhances their ability to provide tailored and best practice supports to children and their families

The friendships of children and youth with attention-deficit hyperactivity disorder: A systematic review

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3. Department of Social Work, Education and Community Wellbeing, Faculty of Health and Life Sciences, University of Northumbria, Newcastle upon Tyne, United Kingdom

Background and aims: Children with attention-deficit hyperactivity disorder (ADHD) experience substantial difficulty maintaining meaningful friendships, which has implications for social functioning and mental health. No systematic review has investigated their friendship difficulties. We aimed to systematically review and methodologically appraise the quality of existing studies reporting on friendships of children with ADHD. To compare their friendships to typically-developing children, and examine the reported role and impact of friendship on children's outcomes.

Methods: Six databases were searched. The methodological quality of studies was assessed using the QualSyst appraisal tool and the Appraisal tool for Cross-Sectional Studies. Aspects of friendships measured were charted, along with comparisons between children with ADHD and typically-developing children and the associations between friendships and social, emotional and mental health outcomes.

Results: Eighteen cross-sectional studies and one longitudinal follow-up study were included. Studies included 1054 participants with ADHD, with 827 typically-developing participants used as a companion in 14 studies. Friendship quantity was the most investigated aspect of friendship. Children and youth with ADHD had significantly fewer friends, lower quality friendships and poorer friendship interactions. There were mixed findings from studies investigating the role or impact of friendship on social, emotional and mental health outcomes. Eighteen had strong methodological quality.

Conclusions: Limited longitudinal studies, small sample sizes and variability in outcome measures restrict the interpretations of friendship over time and the causal impact of friendship on social and emotional outcomes. Further research should investigate the role and impact of friendship on the development and well-being of children and youth with ADHD.

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ABSTRACTS

A Pairwise Randomised Controlled Trial of a Peer-Mediated Play-Based Intervention to Improve the Social Play Skills of Children with ADHD: Outcomes of the Typically-Developing Playmates

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Background and aims: Social difficulties experienced by children with ADHD are much greater than those of their typically-developing peers. Children with ADHD are often frequently rejected by peers and have challenges in relationships with siblings and developing and maintaining friendships. We aimed to examine the effectiveness of a play-based intervention for improving social play skills of typically-developing playmates of children with ADHD.

Methods: Children (5–11 years) were randomised to an intervention-first ($n = 15$) or control-first group ($n = 14$). The Test of Playfulness was scored by a blinded rater. Between-group statistics compared the change of the intervention-first (10-week intervention) and control-first (10-week wait) groups.

Results: Change in the intervention-first group following intervention was significantly greater than the change in the control-first group. When combining data from the groups, playmates' ($n=29$) mean ToP scores improved significantly following intervention, with a large effect pre- to post-intervention and pre-intervention to follow-up.

Conclusions: Typically-developing playmates of children with ADHD benefited from participation in a peer-mediated intervention and could support children with ADHD in their social play interactions.

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A systematic review of video-modelling interventions for children and adolescents with attention-deficit hyperactivity disorder

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Background and aims: The social and behavioural difficulties of children with ADHD are profoundly greater than those experienced by their typically developing peers. Video-modelling may be a promising approach for helping children with ADHD to develop new skills. We aimed to identify, appraise, and synthesise the evidence for video-modelling interventions for individuals with attention-deficit hyperactivity disorder (ADHD).

Methods: We searched four electronic databases. Two independent researchers screened abstracts and methodologically assessed data using the Kmet appraisal checklist.

Results: A total of 15 studies met the inclusion criteria (11 original studies and four follow-up studies). Of the 11 original studies, one was a randomised controlled trial, one was a controlled between-group comparative design, two were one group pre-test post-test studies, one was an experimental 2×2 factorial design, and six were single-case experimental design studies. Studies included 1–35 participants with ADHD aged 5–16 years. Three studies targeted behaviour, three targeted social play skills, two targeted social behaviour, one targeted social skills, one targeted goal orientation and friendship quality, targeted and one attention/comprehension of social behaviour. In four studies video-modelling was the whole intervention, with no other intervention components reported. Nine studies reported positive outcomes immediately after intervention, two studies reported mixed findings. All studies were found to have good or strong methodological quality.

Conclusions: There is preliminary evidence to suggest video-modelling may be a promising intervention approach for targeting the social skills and behaviours of individuals with ADHD when used in conjunction with other intervention components. Future studies need to lower the risk of bias and use larger sample sizes before the efficacy of video-modelling interventions can be fully investigated.

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