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Neurodevelopmental Annual Seminar

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NDAS 2025 Programme

09:00-09:30	Registration and Coffee The Pavilion
09:30-09:45	Welcome B200
09:45-10:45	Early Career Researcher Keynote: Dr Roisin Perry B200
10:45-11:00	Coffee Break The Pavilion
11:00-12:20	Parallel Sessions 1 and 2 B103 and B104
12:20-13:20	Lunch and Posters The Pavilion
13:20-14:40	Parallel Sessions 3 and 4 B103 and B104
14:40-15:00	Coffee Break The Pavilion
15:00-16:00	Parallel Sessions 5 and 6 B103 and B104
16:00-17:00	Established Researcher Keynote: Professor Mary Hanley B200
17:00-17:10	Conference Close B200
17:15-18:30	Wine Reception The Pavilion

Parallel Session 1: B103, 11:00-12:20 - Cognition and Learning

Time	Authors	Title
11:00-11:20	Hannah Jones, Amrita Bains, Laura Randall, Carina Spaulding, Jessie Ricketts & Saloni Krishnan	Investigating reading enjoyment in adults with dyslexia
11:20-11:40	Stella Xu, Michael Thomas & Jo van Herwegen	Individual differences and mathematical profiles in Williams syndrome and Down syndrome
11:40-12:00	Nabila Ali, George Kirov, Jack Underwood, LINC Consortium, Megan Wood, Mark Mon-Williams, James Walters, Peter Holmans, Michael Owen & Marianne van den Bree	A population-based study of academic attainment and behavioural difficulties in children with neurodevelopmental-risk copy number variants
12:00-12:20	Ashley Blake, Richenda Wright, Ewa Dabrowska, Nick Riches & Elodie Winckel	Analogical reasoning predicts linguistic outcomes in children with Developmental Language Disorder

Parallel Session 2: B104, 11:00-12:20 - Autism

Time	Authors	Title
11:00-11:20	Alanna Shand, Lucy Livingston, Sarah Grant & rose Hoekstra	Exploring how autistic people leverage psychological strengths whilst compensating for difficulties
11:20-11:40	Anna Harvey, Helen Spicer-Cain, Nicola Botting & Lucy Henry	Autistic adolescents' narratives: volume and accuracy of recalled information
11:40-12:00	Effy Zachou, Katrina Dulay, Sebastian Gaigg & Anna Lambrechts	Examining emotional self-awareness in autistic children with severe to profound learning disabilities using a novel eye-tracking paradigm
12:00-12:20	Nicola Yuill, Samantha Holt, Alison Smith & Stephanie Daly	'That is our life': Using co-created video to represent families of autistic children with learning disability

Parallel Session 3: B103, 13:20-14:40 - Mental Health and Wellbeing

Time	Authors	Title
13:20-13:40	Emma Hayashibara, Shiqi Lu, Francesca Happé, F. & Giorgia Michelini	Barriers to recognition of mental health problems in neurodivergent young people: Findings from a nationally representative cohort
13:40-14:00	Shiqi Lu, Toby Wise, Georgina Hosan & Giorgia Michelini	Prediction of first-onset depression in young people with and without ADHD from the Adolescent Brain Cognitive Development (ABCD) study
14:00-14:20	Tobias Thiel, Saskia Riedelbauch, Sebastian Gaigg, Veit Roessner & Melanie Ring	The impact of depressive and anxious symptoms on quality of life in autistic adults
14:20-14:40	Anna Lambrechts, Jane Crawford, Katherine Miles, Sasha Slade, Stacey Thorn & Sebastian Gaigg	Evaluating the impact and effectiveness of a pilot programme to foster the wellbeing and participation of autistic pupils in schools

Parallel Session 4: B104, 13:20-14:40 - Methodology

Time	Authors	Title
13:20-13:40	Helen Spicer-Cain & Nicola Botting	Likelihood status is a moveable feast: Classification issues to be considered in familial research on communication disorders
13:40-14:00	Jennie Bullen, Katie-Anne Costello, Zahra Siddiqui, Emily Farran, Jo van Herwegen & Gaia Scerif	Leveraging data tracking for understanding neurodivergent populations: Lessons from the MathMIND Project
14:00-14:20	Michelle St Clair, Suze Leitão, Jenny Gibson & Nicola Botting	The Engage with Developmental Language Disorder project: Expanding the opportunities to conduct high quality DLD research
14:20-14:40	Giorgia Michelini, Wangjingyi Liao, Shiqi Lu, Chiara Caserini, Thalia Eley, Angelica Ronald, Margherita Malanchini, Kaili Rimfeld & Sylia Wilson	Where do neurodevelopmental traits fit in transdiagnostic psychiatric frameworks? New insights from a nationally-representative cohort

Parallel Session 5: B103, 15:00-16:00 – Sleep

Time	Authors	Title
15:00-15:20	Teodora Gliga	Understanding why neurodivergent children struggle to sleep: the contribution of sensory sensitivity
15:20-15:40	Chiara Caserini, Divyangana Rakesh, Shiqi Lu, Rachael Bedford, Cathryn Lewis, Margherita Malanchini & Giorgia Michelini	Longitudinal pathways from the childhood neurodevelopmental spectrum to early adolescent psychiatric dimensions: the mediating role of environmental and lifestyle factors.
15:40-16:00	Vyara Stoyanova & Michelle St Clair	Words, Worries, Wakefulness: Does anxiety mediate the relationship between language and sleep difficulties in school-aged children with and without Developmental Language Disorder?

Parallel Session 6: B104, 15:00-16:00 – Wider Experiences

Time	Authors	Title
15:00-15:20	Katie Gilligan-Lee, Su Morris, Sarah Jones, Megan Davies, Alexandra Broderick Khan & Emily Farran	Technology use, independent living and executive functioning skills in people with Williams Syndrome
15:20-15:40	Elisa Back, Sarah Sumpter, Hilda Mulrooney & Ronald Ranta	Perspectives on the use of a nutritious child-friendly meal recipe kit in neurodivergent families
15:40-16:00	Daniel Brooks	Epilepsy and seizures in young people with a range of pathogenic neurodevelopmental CNV's: Prevalence and associations with neurodevelopmental disorders

Posters – displayed alongside Lunch from 12:20-13:20

Authors	Title
Joanne Arciuli, Annemarie Murphy, Linda Graham, Pamela Snow & Clare Wood	Literacy support for children: focus on policy and practice for diverse learners
Joanne Arciuli, Tess Barich & Annemarie Murphy	Parents views on shared-book reading at home with their children with Down syndrome
Bryony Aspinall, Joanna Greer, Jason Rajsic & Colin Hamilton	Exploring the personality traits associated with hyperfocus in the general population
Thomas Broughton, Ellen Lambert, Jasmin Wertz & Jessica Agnew-Blais	Increased risk of provisional premenstrual dysphoric disorder (PMDD) among females with attention-deficit hyperactivity disorder (ADHD): A cross-sectional survey study
Emily Collins, Samuel Chawner, Joanne Doherty, Jessica Hall, Josephine Haddon, Josh Hope-Bell, IMAGINE-ID Consortium, Jeanne Wolstencroft, David Skuse, Peter Holmans, Jeremy Hall, Michael Owen & Marianne van den Bree	Exploring rumination in children with rare genetic conditions and neurodevelopmental and psychiatric outcomes
Sarah Donald, Nalini Edwards, Anna Remington, Lucy Henry & Sebastian Gaigg	Using Experience-Based Co-Design to explore stakeholders' experiences of conducting research with autistic people who have complex additional support needs.
Anna Douglas, Kayla Smith, Caroline Richards, Joanna Moss, Jane Waite, Kelly Wade & Hayley Crawford	The association between sleep, autism and anxiety in fragile X syndrome
Jovana Durica & Debbie Gooch	Educational professionals' perspectives on the social-emotional experiences of adolescents with reading difficulties: a focus group study
Louise Glanville, Laura Biggart & Joni Holmes	Experience Sampling Research in UK schools - an exploration of perceived barriers and facilitators
Sandra McKay, Colin Hamilton, Michael Craig & Joanna Greer	Whispers of attention in the classroom: a pilot study investigating ASMR to support ADHD-associated issues in kindergarten children in UAE
Christina Griva, Debbie Gooch, Sarah Aylett, Penny Andreou, Jenny Sloneem, Hanna Richardson & Jo Moss	Investigating the prevalence and profile of Attention-Deficit/Hyperactivity Disorder (ADHD) in children and young people with Sturge-Weber Syndrome
Anna Harvey, Niamh Devane, Helen Spicer-Cain, Lucy Henry, Tracey Booth & Stephanie Wilson	Could an online virtual world (EVA Park) be used for delivering speech and language therapy to autistic children?
Ellen Hedstrom, Claire Ballard, Naomi James, Kasia Kostyrka-Allchone, Hannah Wright & Edmund Sonuga-Barke	"Keeping People in Limbo" - Parents' experiences of waiting for an ADHD assessment with CAMHS in England.

Josh Hope-Bell, Samuel Chawner, Jessica Hall, IMAGINE-ID Consortium, Jeanne Wolstencroft, David Skuse, Peter Holmans, Jeremy Hall, Michael Owen & Marianne van den Bree	The cognitive and psychiatric trajectories of children with rare neurodevelopmental genetic conditions: longitudinal findings from the IMAGINE-ID study
Lucy Hughes, Ellie Pyke & Jack Binns	Thematic Analysis of parental views on the outcome of their child's neurodevelopmental assessment for Autism and ADHD
Themis Karaminis & Marta Dickinson	How much do press representations of autism influence public attitudes alongside other factors?
Joanna Kubiak, Michael Craig, Kristofor McCarty & Joanna Greer	Profiling everyday memory functioning across the autism and ADHD spectrums
Catherine Lawton, Ace Tacca, Francesca Happé, Silia Vitoratou & Emily Simonoff	Systematic literature review of the accuracy of instruments measuring anxiety symptoms in people with Intellectual Disability
Jaimie Leung & Lisa Thackeray	"They Just Want to Be Seen": A Qualitative Exploration of Practitioners providing Mental Health Therapies to Autistic Children and Young People
Elisa Mattiauda, Onur Özsoy, Mariia Bulkina & Alexandra Perovic	Narrative speech fluency in Down syndrome: Disfluencies, language and cognitive abilities in adolescents and adults
Kyleigh Melville, Karri Gillespie-Smith, Catherine Manning & Katie Cebula	A mixed-methods exploration of school staffs' experiences of multi-sensory environment use with neurodivergent students
Becky Moss, Nicola Botting & Lucy Henry	'We have immense affection for the people that worked in that hospital': a retrospective qualitative interview study on parenting a preterm or developmentally delayed child in lockdown
Reanna Obano, Anna Lambrechts & Paula Corcoran	Women's experience of autistic burnout: A thematic analysis of reddit
Nevin Ozden, Sam Gilbert, Sveta Mayer & Sarah White	Beyond the here and now: Theory of Mind, episodic memory, and episodic future thinking
Helena Pumfrey, Samuel Chawner, Joanne Doherty, Jessica Hall, Josephine Haddon, Josh Hope-Bell, IMAGINE-ID Consortium, Jeanne Wolstencroft, David Skuse, Peter Holmans, Jeremy Hall, Michael Owen & Marianne van den Bree	Selective Mutism in children and young People with rare neurodevelopmental genetic conditions
Muhammad Amiro Rasheeq Mohd Radzi & Mohd Kamaruzaman	Better functional gains through early autism intervention
Yasamin Rahmati & Chris Jarrold	Sensory differences across six modalities and three levels in autistic adults, neurotypical adults, and individuals with ASC/ADHD traits

Sonia Singh, Sana Chughtai & Saloni Krishnan	Can we harness curiosity to boost word learning in neurodivergent children?
Shreeya Sivakumar, Sally Morrin, Samuel Chawner, Joanne Doherty, Jessica Hall, Josephine Haddon, Josh Hope-Bell, IMAGINE-ID Consortium, Jeanne Wolstencroft, David Skuse, Peter Holmans, Jeremy Hall, Michael Owen & Marianne van den Bree	Relationship between Self-Injurious Behaviour and neuropsychiatric outcomes in young people with rare genetic conditions
James Smith-Spark & Madalyn Huang	Self-reported adult dyslexia traits predict cognitive failures in the workplace: An online survey of Prolific users
Maximillian Soares Miehlstein & Ashley Maynard	Documenting queer and disabled lived experiences and values through art
Goffredina Spanò, Alexa Steblaj, Paulina Lipiec, Jessica Prior, Katharine Clifford, Jocelyn Kwok, Ifigeneia Manitsa, and Yuey Leong-Cheng	Redefining sleep in autistic young adults
Carla Startin	Exploring how neurodiverse undergraduate students can be best supported as they transition to university and throughout their degree
Kai Jia Tey & Alejandrina Cristia	Vocal development across atypical developing children
Laura Vaccari, Helen Spicer-Cain & Ros Herman	Limitations and challenges of deaf autism assessment (DAA): Insights from parents and professionals

Early Career Researcher Keynote:

Dr Roisin Perry

Institute of Education, University College London

Taking diversity in neurodivergent development seriously: Implications for school support

In the context of disproportionately high rates of mental illness in neurodivergent young people and a substantial Special Educational Needs and Disability (SEND) gap that widens throughout schooling, there is an urgent need to better understand protective and risk factors for mental health and educational attainment in neurodivergent pupils so that we can intervene to promote more positive outcomes. However, whilst heterogeneity in neurodevelopmental conditions is widely acknowledged, little research has attempted to understand the processes through which individual differences in outcomes arise. Further, whilst many effective interventions and support strategies exist for neurodivergent students, these overlook factors beyond core diagnostic features that might influence their school success and wellbeing. In this talk, I will discuss findings from my research on a) the multiple and varied needs of neurodivergent students and b) how family and sociocultural factors predict support needs and highlight the implications of these findings for targeted support in schools. I will also highlight challenges of conducting research in this area and outstanding questions.

Speaker Biography:

Dr Roisin Perry is a lecturer at IOE, UCL's Faculty of Education and Society. Her research is concerned with risk and protective factors for school and mental health related outcomes, particularly in neurodivergent children and young people, and how we might reduce inequalities in outcomes. She is a developmental cognitive psychologist by background and completed her PhD in Psychology and Human Development at IOE last year.

Established Researcher Keynote:

Professor Mary Hanley

Centre for Neurodiversity and Development, Durham University

Translating research to practice: supporting neurodivergent learners with the challenges of school life

School can be a particularly challenging environment for neurodivergent learners. This is often not due to the academic demands of learning, but challenges with school life. For instance, school is a busy, unpredictable and complex multi-sensory environment. This presents unique challenges for autistic and neurodivergent learners because this diverse group of children and young people (CYP) tend to have differences and difficulties with **a**ttention, sensory **a**rousal, and **a**nxiety (what we refer to as **Triple-A**). Research from our group has shown the kinds of impacts that differences with attention (Hanley et al., 2017; McDougal et al., 2020 a), sensory arousal (Jones et al., 2020; McDougal et al., 2020b) and anxiety (Jones et al., 2020; McDougal et al., 2020b) can have at school. We argue two key things – to support autistic and neurodivergent learners these issues should be considered together, and the impact of the school environment itself must be taken into account (Hanley et al., 2025; Jones et al., 2024).

In this talk, I will give an overview of our research on these issues and how we have gone about translating this evidence to impact– mainly via our Triple-A online training for educators (www.tripleadurham.co.uk; Hanley et a;., 2025). Triple-A is a co-produced training package (with non-academic and academic stakeholders) which provides evidence-based psychoeducation as well as a suite of practical support strategies. Since launching in 2022, Triple-A has reached over 8000 users, mostly in the UK (but also internationally) and the evidence of impact is very positive. I will talk about this impact journey, and how it has led to new research on school experiences for neurodivergent learners. In particular, in thinking about with how school distress can lead to attendance difficulties, but also how we can start to think about what challenges need to be overcome to promote school success.

Speaker Biography:

Mary Hanley is a Professor in the Department of Psychology at Durham University. She is a Co-founder and Co-Director for the Centre for Neurodiversity and Development at Durham University. Mary's research is broadly about understanding strengths and difficulties for neurodiverse groups, mostly for autistic people and people with Williams syndrome. She is especially interested in how challenges with attention, sensory arousal and anxiety interact with each other and impact on engaging and learning at school. Over the last number of years, she has focused on translating this research evidence to practice within education, to change practice and benefit neurodivergent children and young people. The approach taken in this work is collaborative (e.g. with Durham County Council, Investing in Children) and participatory. Mary is committed to impact and engagement beyond the academy, and has worked closely with many key stakeholder organisations linked to her research, including the Williams syndrome Association of Ireland, the Williams Syndrome Foundation UK, the North East Autism Society. In 2022, she established the Junior Scientist Programme at Durham University – a summer event designed to bring local families into the University and engage them in psychological science. In 2024, she was awarded the BPS Developmental Psychology award for 'Impact and Engagement'.

Abstracts for Oral Presentations

Investigating reading enjoyment in adults with dyslexia

Hannah Jones[1,2], Amrita Bains[1,3], Laura Randall[1], Carina Spaulding[4], Jessie Ricketts[1], Saloni Krishnan[1,2]

[1] Department of Psychology, Royal Holloway, University of London, Surrey, UK
[2] Department of Language and Cognition, Division of Psychology and Language Sciences, UCL, UK
[3] Department of Experimental Psychology, University of Oxford, UK
[4] The Reading Agency, London, UK

Previous studies have suggested that adults with dyslexia do not enjoy reading, based on trait-based questionnaires. This study uses state-based measures of reading to offer greater insight into aspects of motivation, including liking and wanting. In a new paradigm sensitive to dynamic changes in reading enjoyment, adults with dyslexia (n = 59) and without dyslexia (n = 59) read 24 book extracts, rated their enjoyment and answered a question about the extract. Subsequently, participants decided whether to accept a cost (e.g., 3–6 s wait) to read the next paragraph. We also collected traditional trait-based measures of enjoyment. While neurotypical adults had higher trait-based reading enjoyment, average state-based reading enjoyment did not differ between groups. The relationship between high enjoyment states and subsequent benefits was altered in dyslexia. While heightened states of enjoyment increased the likelihood of continuing to read, this was attenuated in adults with dyslexia. In neurotypical adults, high states of enjoyment increased the likelihood of answering the question about the text correctly; this relationship did not hold in adults with dyslexia. Our findings shed light on how links between intrinsic value and subsequent motivation are altered in adults with dyslexia, suggesting that reading enjoyment can drive reading engagement but not comprehension.

Individual Differences and Mathematical Profiles in Williams syndrome and Down syndrome

Stella Xu[1,2], Michael S. C. Thomas[2,3] & Jo Van Herwegen[1,2]

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[3] Department of Psychological Sciences, Birkbeck, University of London, London, UK

Individuals with Williams Syndrome (WS) and Down Syndrome (DS) are frequently compared due to their similar levels of learning difficulties and uneven cognitive profiles. While past studies have identified mathematics as a weakness in both conditions, mathematics is a complex, componential subject (e.g., counting, arithmetic), and there may be variability in strengths and weaknesses across components. This study examines 1) how mathematical skills vary within each child with WS or DS (within-individual variability), 2) how skills vary within each condition (within-group variability), and 3) whether profiles are characteristic of each condition or represent transdiagnostic groupings (between-group differences). 80 participants aged 5-18 years are being recruited. Data has been collected for 38 participants with WS and 19 with DS using a battery of cognitive and math measures. Initial profile plots showed that individuals with WS and DS demonstrated strengths in number familiarity – observed within individuals and within each group. MANOVA results revealed significant differences between the groups in magnitude comparison and maths language. Findings challenge the notion of mathematics as an overall weakness, revealing relative strengths in some foundational skills. These insights can inform more effective educational plans by identifying areas needing more support while building on existing strengths.

A population-based study of academic attainment and behavioural difficulties in children with neurodevelopmental-risk copy number variants

Nabila M.H. Ali[1,2], George Kirov[1], Jack F.G. Underwood[1], LINC consortium, Megan Wood[2], Mark Mon-Willams[2], James Walters[1,3], Peter Holmans[1,3], Michael J. Owen[1,3], Marianne B.M. van den Bree[1,3]

[1] Centre for Neuropsychiatric Genetics and Genomics, Division of Psychological Medicine and Clinical Neurosciences, Cardiff University, Cardiff, UK
[2] School of Psychology, University of Leeds and Born in Bradford's Centre for Applied Education Research, Bradford, UK
[3] Neuroscience and Mental Health Innovation Institute, Cardiff University, Cardiff, UK

Background: Rare chromosomal deletions and duplications, known as copy number variants (CNVs), substantially increase the likelihood of neurodevelopmental conditions (ND-CNVs) and are associated with physical health disorders later in life. However, the impact of ND-CNVs on daily functioning in children in the general population remains poorly understood, and there is a lack of research focused on delivering medical care and educational support for these children.

Methods: We identified 54 ND-CNVs in children (n=7477) from the multi-ethnic (59% South Asian (SA) ancestry and 41% European (EU) ancestry), Born in Bradford (BiB) birth cohort. Linkage to the National Pupil Database enabled exploration of school performance and special education needs (SEN) support. Teachers completed the Strengths and Difficulties Questionnaire (SDQ), providing insights into neurodevelopmental and behavioural difficulties. Diagnosis of genetic and neurodevelopmental conditions (NDCs) were extracted from electronic health records.

Results: 141 children (~2%) had one or more ND-CNVs, with higher rates in children of EU (2.9%) compared to those of SA ancestry (1.5%). Children with a ND-CNV faced challenges in communication and language, alongside difficulties in physical development and social skills as early as ages 4 to 5. By age 6-7, 51.4% of children with ND-CNVs failed to meet expected academic targets, particularly in reading and writing. Furthermore, children with ND-CNVs displayed more hyperactivity, conduct problems, and difficulties with prosocial behaviour. Only 24 (16%) children with a ND-CNV had received a genetic diagnosis and only 12 (8.5%) a NDC diagnosis. No differences were found in SEN provision between those with and without a ND-CNV.

Conclusions: Children with a ND-CNV show poorer school performance and increased neurodevelopmental and behavioural difficulties. Despite these vulnerabilities, few had received a genetic diagnosis or SEN support. These findings indicate that academic and behavioural difficulties in school may indicate the presence of a rare genetic variant. Furthermore, they indicate a need for improved school-based support and medical service provision. Early diagnosis of ND-CNVs and timely implementation of care and support where indicated can have lifelong benefits for the mental and physical well-being of the vulnerable group of children.

Analogical reasoning predicts linguistic outcomes in children with developmental language disorder

Ashley Blake, Richenda Wright, Ewa Dabrowska, Nick Riches, Elodie Winckel

University of Birmingham
Friedrich-Alexander-Universität Erlangen-Nürnberg

This study investigated the relationship between language and cognition in children with and without developmental language disorder (DLD). We examined how specific cognitive abilities—analogical reasoning (grammatical analogies and scene analogies), implicit statistical learning, and inhibition—

predicted linguistic outcomes. Language tasks included receptive and expressive grammar, collocational knowledge, and vocabulary. 73 children (39 language typical and 34 with DLD, with a mean age of 10;8 years) took part in a moderated online study. Consistent with previous research, we found large between-group differences in all language measures. In the cognitive tasks there were large differences between the LT and DLD groups in analogical reasoning, and similar performance in both groups in implicit statistical learning and inhibition. The most striking finding was that analogical reasoning predicted the most variance in all linguistic measures. This, together with the fact that we found significant group differences in performance on these tasks, suggests that analogical reasoning is a key predictor of linguistic outcomes in children with and without DLD.

Exploring how autistic people leverage psychological strengths whilst compensating for difficulties

Alanna J. Shand, Lucy A. Livingston, Sarah Grant, Rosa A. Hoekstra

King's College London

Some autistic adults engage in compensation; the use of active strategies to appear neurotypical and/or manage differences and difficulties. Research investigating how autistic people compensate is limited, though a possible mechanism may be psychological strengths. The present study aimed to explore how autistic adults use perceived strengths to compensate and the possible (positive or negative) implications for life outcomes. Individual in-depth online interviews (N=16) were conducted with self-identifying (N=3) and diagnosed (N=13) autistic adults. An autistic advisory board informed the development of the topic guide. Interview transcripts were analysed using a hybrid inductive/deductive approach to template thematic analysis. Preliminary analyses suggest three categories of strengths are leveraged during compensation: (1) Cognitive and learning (e.g., attention to detail), (2) Personality and character (e.g., adaptability), and (3) Social and relational (e.g., empathy). Examples included using working memory to create mental catalogues of social behaviours, utilising self-awareness to regulate emotions and avoid burnout, and employing humour during social interactions. Strengths were often viewed as a double-edged sword, with both benefits and costs for life outcomes. This study suggests that psychological strengths may be leveraged during compensation, informing our understanding of compensation in autism and avenues for promoting positive life outcomes.

Autistic adolescents' narratives: volume and accuracy of recalled information

Anna Harvey, Helen Spicer-Cain, Nicola Botting, Lucy Henry

City St George's, University of London, UK

Providing detailed and accurate verbal accounts is an important skill for adolescents. Research in this area has focused on 'eyewitness' testimony; however, the volume and accuracy of recalled information are also important aspects of narrative in informal daily interactions. Previous studies suggest that although autistic adolescents recall less information about witnessed events than neurotypical comparison groups, their accounts tend to be equally accurate. The present study investigated whether these findings would be replicated in a free recall task that aimed to reflect real-life instances of narrative production.

After watching two short videos, 107 adolescents aged 11-15 years (52 autistic; 55 non-autistic) gave an immediate verbal account of what they had seen. Narratives were transcribed and scored for volume of correct/incorrect details and percentage accuracy. Hierarchical linear regressions were used to investigate relationships between diagnostic status and volume/accuracy, with age, non-verbal cognitive ability, receptive and expressive language skills controlled in the analyses.

Overall, autistic adolescents produced a lower volume of information than non-autistic peers in their verbal narratives, but the information recalled was no less accurate. This supports previous findings that autistic young people are reliable eyewitnesses but may benefit from additional support to generate more detailed accounts when describing events.

Examining emotional self-awareness in autistic children with severe to profound learning disabilities using a novel eye-tracking paradigm

Effy Zachou, Katrina Dulay, Sebastian Gaigg, Anna Lambrechts

Department of Psychology, School of Health & Psychological Sciences,
City St George's, University of London, UK

Background: Current research suggests that difficulties with emotional self-awareness (Alexithymia), are more prevalent among autistic than non-autistic individuals. However, heavy reliance on self-report questionnaires to measure Alexithymia means that autistic people with learning disabilities are excluded from relevant research.
Aim: This study investigates whether autistic children with severe to profound learning disabilities have difficulties identifying their emotions using a novel eye-tracking paradigm.
Method: The paradigm uses eye-tracking technology and a preferential-looking methodology. In Phase 1, participants view 16 personalised video stimuli that aim to elicit positive expressions. In Phase 2, participants view the same video stimuli followed either by self-face photographs expressing positive (congruent) or neutral (incongruent) affect ('Emotion' condition) or by self-face photographs that were either unaltered (congruent) or altered (incongruent) in appearance by adding glasses ('Appearance' condition).
Preliminary results: Preliminary data obtained from 8 children so far show differential visual exploration of self-face images in the Appearance condition, but similar visual exploration of self-face images in the Emotion condition, which may suggest difficulties with aspects of emotional but not physical self-awareness.
Conclusion: Although more research is warranted, preliminary results suggest that eye-tracking paradigms could serve as an index of emotional self-awareness in autistic children with complex support needs.

'That is our life': Using co-created video to represent families of autistic children with learning disability

Nicola Yuill, Samantha Holt, Alison Smith, Stephanie Daly

School of Psychology, Brighton and Sussex Medical School, University of Sussex

Autistic people with learning disabilities show strikingly poorer health outcomes than other groups. A systematic review suggests that miscommunication, unsuitable physical environments and lack of knowledge contributes to these health inequalities. Do families supporting such children think that lived-experience videos to share with practitioners as part of health and care planning would support better healthcare and is it a feasible method for health communication? The Our Stories project worked with the Time for Autism initiative, involving training medical students to help them understand better the health needs of autistic people and their families. We supplemented the initiative by supporting families to co-create short videos about their child for medical students, who also shared videos. We interviewed 3 mothers and 2 medical students about their experiences of sharing the videos created. We report a thematic analysis addressing the perceived benefits and potential difficulties with the proposed method. We conclude that the method could provide real benefits to healthcare for communication, empathy, provision of context and using an audio-visual medium. The results also show amendments needed in relation to reciprocity of students/families sharing videos and scaling the initiative.

Barriers to recognition of mental health problems in neurodivergent young people: Findings from a nationally representative cohort

Emma Hayashibara[1], Shiqi Lu[1], Francesca Happé[2], Giorgia Michelini[1]

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[2] Social, Genetic and Developmental Psychiatry Centre, Institute of Psychiatry, Psychology and Neuroscience, King's College London, UK

Neurodiversity charities highlight that neurodivergent youth face significant barriers to timely diagnosis of mental health problems. Here we examined this issue and investigated clinical and socio-demographic factors contributing to these barriers in a nationally representative UK cohort. Using data from the Millennium Cohort Study, we examined rates of mental health diagnoses (depression and anxiety reported at age 17) in neurodivergent youth (N=1,494) with neurodevelopmental diagnoses between 5-14 years vs neurotypical youth (N=10,249) and the association of neurodevelopmental and mental health diagnoses with parent-reported Strengths and Difficulties Questionnaire emotional symptoms at age 14. Logistic regressions in neurodivergent participants tested whether the number of neurodevelopmental diagnoses, racial/ethnic background, socioeconomic status, and sex predicted the presence/absence of mental health diagnoses, controlling for emotional symptoms. At a group level, mental health diagnoses were more common in neurodivergent youth (8.77%) compared to neurotypical youth (5.92%). Neurodevelopmental and mental health diagnoses were independently associated with emotional symptoms. Neurodivergent youth from minority racial/ethnic backgrounds and neurodivergent boys were less likely to receive a mental health diagnosis than white youth and girls, despite displaying significant mental health problems. These findings emphasise the urgency of addressing barriers to mental healthcare, particularly for neurodivergent boys from minority racial/ethnic backgrounds.

Prediction of first-onset depression in young people with and without ADHD from the Adolescent Brain Cognitive Development (ABCD) study

Shiqi Lu[1], Toby Wise[2], Georgina M. Hosang[3], Giorgia Michelini[1]

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Adolescents with attention-deficit/hyperactivity disorder (ADHD) are more likely to develop depression than neurotypical youth. It is unclear whether predictors of first-onset depression in ADHD are the same as in neurotypical samples and could help identify adolescents at highest risk for targeted prevention. Here we developed a prediction model for first-onset depression in adolescents with and without ADHD. We analysed data from 9-10-year-old unrelated children with no depression history from the Adolescent Brain Cognitive Development study, including 584 with ADHD and 4,219 without ADHD, who were followed-up 2 years later. A comprehensive set of clinically-relevant baseline predictors, spanning cognition, temperament, mental and physical health, and socio-demographic and environmental factors, was used in machine learning models (support vector machine, random forest, elastic net) to predict first-onsets. 18.66% of participants with ADHD and 8.72% without ADHD developed depression. Models trained within the ADHD group achieved lower predictive power (area under the curve [AUC]=0.51, accuracy=0.58-0.78) than models trained on the non-ADHD sample (AUC=0.66-0.70, accuracy=0.71-0.84), likely due to lower sample size. Depression predictors in ADHD and non-ADHD groups only partly overlapped. These findings highlight the need to tailor early identification and prevention strategies to adolescents with ADHD and develop depression prediction models in larger samples.

The impact of depressive and anxious symptoms on quality of life in autistic adults

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Quality of life (QoL) is lower in autistic compared to non-autistic adults. In this context, recent studies have examined the role of depressive and anxious symptoms in reducing QoL in autistic adults. The aim of this study was to (1) replicate these findings of lower QoL and (2) assess the negative influence of depressive and anxious symptoms on QoL in an autistic (N = 86) and non-autistic adult (N = 87) German sample with a broad age range (18–70 years). For this, we used questionnaires that have been validated for autistic and non-autistic adults: the World Health Organization Quality of Life Brief Version, the Autism-Specific QoL items, and the Hospital Anxiety and Depression Scale. We replicated previous findings and extended them to autism-specific QoL. Our autistic adults reported lower QoL than the non-autistic adults. However, depressive symptoms were the largest contributor to lower QoL in both groups, more so than group membership and anxious symptoms. We conclude that interventions to improve QoL in autistic adults should specifically target depressive symptoms and for this, improvements to the diagnostic process and treatment of depression in autism are necessary.

Evaluating the impact and effectiveness of a pilot programme to foster the wellbeing and participation of autistic pupils in schools

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Autistic pupils are more likely to be absent from school than their neurotypical peers, with potential repercussions on educational, socio-economical and medical outcomes. The school environment might be particularly challenging for an autistic young person due to sensory sensitivities, difficulties navigating relationships with peers and staff, mental health issues, and demands on cognitive processing. The Pupil Programme is delivered over 6 weeks by the West Sussex City Council and ASPENS charity to support autistic pupils in mainstream schools. It promotes emotional wellbeing in pupils and changes to cultural attitudes about neurodiversity. This study evaluated the impact of the Pupil Programme by assessing autistic pupils' wellbeing, mental health and participation in school activities before, immediately after and one school term after the end of the programme. 99 pupils and 63 parents across 15 schools completed self- and parent-report surveys. Results indicated a sustained decrease in pupils' anxiety levels after taking part in the programme, but no overall change in levels of wellbeing, stress or participation. At the individual level however, increased participation was associated with increased wellbeing and decreased levels of stress and anxiety. Our findings points to the importance of wellbeing and dysphoria in the mechanisms underlying participation in school.

Likelihood status is a moveable feast:
Classification issues to be considered in familial research on communication disorders

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Background: Research aiming to support early identification of developmental conditions often uses methodologies that focus on "increased likelihood" infants, who have family members with a related diagnosis. This research often follows participants to a point of short-term outcomes, usually at around the age of 3. Based on a wider longitudinal study of infants with increased likelihood of autism and/or language impairment, we aimed to look at whether likelihood status remained stable or changed over time.
Methods: 67 infants were followed up from age 1 to age 7. Children were categorised in infancy into one of three likelihood groups on the basis of parental interview and questionnaires about the communication skills of siblings: average likelihood of communication difficulties (AL), increased likelihood of social communication difficulties (ILSCD) and increased likelihood of language impairment (ILLI). Likelihood status was then reassessed when the children were 7 years of age.
Results: In this study, 25.4% of children changed likelihood status from age 1 to age 7, based on further information about their family members. In many cases, this reflected later diagnoses received by siblings or parents, or changes in sibling/parent diagnosis. Although this was reduced by using stricter criteria for group membership at both ages, this did not completely eliminate changes in likelihood status.
Conclusion: Likelihood status appears moveable for a significant number of children. This is something that needs to be considered and reported when carrying out increased likelihood research.

Leveraging Data Tracking for Understanding Neurodivergent Populations:
Lessons from the MathMIND Project

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Research on neurodivergent populations presents unique considerations and challenges. Current standards for psychological research are designed for use with neurotypical children, therefore, are often not wholly appropriate for research with neurodivergent children. Many researchers of neurodivergent populations understand these challenges and the need for flexibility but rarely is this documented. The proposed talk will discuss lessons learned from the MathMIND Project, a project investigating the foundations of numeracy in 240 young children with Down Syndrome, Fragile X Syndrome, or Williams Syndrome. The MathMIND Project has sought to explore some of these considerations for differences in neurodiversity research by employing specialised systems of data tracking to capture task attrition, task refusal, early task exit or skipping, and missing data. The project also uses extensive field note-taking systems to document modifications (i.e., nonverbal responses) and special circumstances to provide further insight into testing considerations. The proposed talk will discuss the importance of additional data tracking for neurodivergent populations and lessons learned from this process. We will also present a data tracking and research checklist for neurodiversity research, a system to help Early Career Researchers decide what information to include in data tracking. The free checklist will be available through the OSF website.

The Engage with Developmental Language Disorder project: Expanding the opportunities to conduct high quality DLD research

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Developmental Language Disorder (DLD) is both under-researched (Bishop, 2010; McGregor, 2020) and underfunded (Bishop, 2010), despite DLD being one of the most common neurodevelopmental disorders affecting 7.6% of the population. In 2020 the Engage with DLD or E-DLD project was launched to help researchers conduct more and better research into DLD, by supporting recruitment of parents of children with DLD and children and adults with DLD. We currently have over 340 parent E-DLD members and nearly 90 adult E-DLD members with either diagnosed or suspected DLD. Approximately 70% of our E-DLD members are UK residents, but the 30% of our international E-DLD members represent all major areas of the globe. At present, 63% of our members have completed at least one yearly survey and many complete the survey each year. We have also advertised 69 research studies from 27 institutions across three continents. In 2024, we made an anonymised version of our parent database available for secondary data analysis projects to researchers at established research organisations. This talk will detail our parent/child and adult cohorts to encourage DLD researchers to make use of the E-DLD project to facilitate recruit into their own projects, including how E-DLD can support funding applications.

Where do neurodevelopmental traits fit in transdiagnostic psychiatric frameworks? New insights from a nationally-representative cohort

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Neurodevelopmental conditions are classified together in diagnostic manuals, but high levels of cooccurrence, arbitrary diagnostic boundaries and high heterogeneity present significant challenges in clinical settings. Transdiagnostic dimensional approaches offer promising solutions but have largely omitted neurodevelopmental conditions. This presentation will review evidence supporting a novel transdiagnostic neurodevelopmental spectrum, reflecting the dimensional and overlapping nature of neurodevelopmental traits, and present new data on its structure and associations with predictors and outcomes in a nationally-representative cohort. Available evidence supports a conceptual framework supporting the structure, validity, and clinical utility of the neurodevelopmental spectrum. Using longitudinal data for >10,000 twins from the Twins Early Development Study, we applied hierarchical factor modelling to delineate a phenotypic neurodevelopmental spectrum alongside internalising and externalising dimensions at ages 7, 12 and 16. This neurodevelopmental spectrum was highly heritable across development and predicted by polygenic scores for neurodevelopmental, cognitive and educational phenotypes as well as by perinatal/early developmental factors (e.g., low birth weight, language delays). Differences between children in this neurodevelopmental spectrum predicted cognitive and educational outcomes concurrently and longitudinally, largely due to overlapping genetic effects. Our findings provide

strong support for integrating the neurodevelopmental spectrum into transdiagnostic frameworks, with important implications for research, classification, and clinical care.

Understanding why neurodivergent children struggle to sleep: the contribution of sensory sensitivity

Teodora Gliga

University of East Anglia

There is now strong evidence that sleep benefits learning throughout lifespan with no stronger hint other than the large amount of time young infants spend asleep. Yet, sleep length and patterns vary greatly from child to child and difficulties falling asleep and staying asleep were described from the first year of life in infants at higher likelihood of developing autism. In this talk, I will focus on our research linking sensory hypersensitivity and poor sleep, in infants. I will discuss evidence that sensory hypersensitivity associates with poor sleep across typical and atypical development. I will show how we use neural measures of sleep to reveal underlying mechanisms (and discuss the challenges that come with using these methods with young & neurodiverse populations). Finally, I will present emerging evidence for a role of familial hypersensitivity and discuss how our future approaches to improving children's sleep will have to take into account genes, brains and the familial environment.

Longitudinal pathways from the childhood neurodevelopmental spectrum to early adolescent psychiatric dimensions: the mediating role of environmental and lifestyle factors

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Transdiagnostic dimensional approaches are ideal for understanding psychiatric comorbidity and developmental continuity but have rarely been used to explore links between neurodevelopmental conditions and mental health outcomes. Building on recent evidence for a transdiagnostic "neurodevelopmental spectrum," we examined its longitudinal associations with psychopathology dimensions in early adolescence and the mediating role of environmental and lifestyle factors. In 11,875 children from the Adolescent Brain Cognitive Development (ABCD) study, we extracted neurodevelopmental, internalizing, externalizing, somatoform, and detachment dimensions at ages 10, 11, and 12 through confirmatory factor analysis of Child Behavior Checklist items. Linear random-intercept models tested prospective associations between the neurodevelopmental spectrum at age 10 and psychiatric dimensions at age 11 and 12. Mediation models assessed whether environmental (e.g., family conflict, school involvement) and lifestyle (e.g., sleep, physical activity) factors at age 11 mediated these associations. The neurodevelopmental spectrum showed strong longitudinal associations with all psychiatric dimensions (β=0.417-0.641, $p<0.001$). Sleep was the strongest mediator, explaining 12-29% of these associations. Results remained significant after multiple testing corrections and covariate adjustments. Our findings revealed a wide range of poor psychiatric outcomes in young people with neurodevelopmental traits and identify sleep as a promising intervention target for improving mental health in this population.

Words, Worries, Wakefulness: Does anxiety mediate the relationship between language and sleep difficulties in school-aged children with and without Developmental Language Disorder?

Vyara Stoyanova and Michelle St Clair

University of Bath

Sleep difficulties and anxiety are highly prevalent among children with Developmental Language Disorder (DLD). Among youth with other neurodevelopmental conditions, elevated anxiety is associated with increased sleep difficulties. However, few studies have investigated sleep in DLD populations and neither has included anxiety as a potential contributor. This study asked caregivers of children aged 6–10 with (*N* = 40) and without (*N* = 74) DLD to complete the Children's Communication Checklist-2, the Children's Sleep Habits Questionnaire, and the Spence Children's Anxiety Scale. It investigated whether child anxiety mediates the relationship between 1) language difficulties and sleep, 2) DLD diagnosis and sleep, 3) sleep and language difficulties and 4) sleep and DLD diagnosis. Three mediations were significant but partial. Anxiety mediated 58% of the effect of language difficulties on sleep, 53% of the effect of DLD diagnosis on sleep and 41% of the effect of sleep on language difficulties. The effect of sleep problems on DLD diagnosis was not mediated by anxiety. This study reveals a complex bidirectional relationship between language and sleep and emphasises the need for anxiety and sleep interventions for children with DLD. It also highlights the importance of measuring language difficulties even when DLD diagnosis is reported.

Technology use, independent living and executive functioning skills in people with Williams Syndrome

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Technology is increasingly necessary for daily activities and independent living. However, research into how people with intellectual disability, particularly people with Williams Syndrome (WS), use technology, social media and gaming is lacking. Understanding how people with WS interact with and use technology is crucial for fostering technology accessibility, independent living, and social engagement. The aim of this study was to establish patterns of technology-use in people with WS, and how executive functioning and independent living skills are associated with technology-use. Caregivers (*n* = 141) of individuals with WS aged 5-56 years (53.2% male, 46.8% female) completed an online survey on behalf of their son/daughter. The survey utilised two standardised measures (VABS-II and BRIEF) and a technology measure (TOGSS) designed by the researchers of this project. Results showed high engagement of their sons/daughters with technology and moderate engagement with gaming and social media. Overall technology-use did not predict daily living, communication or socialisation skills, but was associated with executive functioning. Gaming and social media-use predicted communication and socialisation skills. Poor executive functioning was associated with lower daily living, communication and socialisation skills. These findings highlight the need to develop tools to support executive functioning, and to explore the relations between gaming and social media-use, and communication and socialisation skills.

Perspectives on the use of a nutritious child-friendly meal recipe kit in neurodivergent families

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Autistic children often exhibit atypical eating behaviours which can result in limited dietary variety, leading to nutritional deficiencies and increased health risks. Eating difficulties can also contribute to familial stress during mealtimes. This study explored the impact of a child-focused meal recipe kit scheme (BRITE Box) in autistic households, focusing on changes in eating behaviours, willingness to try new foods, and engagement in cooking, as well as development of social, numeracy, and literacy skills. Eighteen participants (eight parents, eight autistic children, one neurodivergent young adult, and one teacher), engaged in individual semi-structured interviews. Reflexive thematic analysis identified four main themes: sensory preferences, restrictive eating, benefits to children, and family/community experiences. Common challenges included sensory aversions to food textures and restrictive eating habits. Positive outcomes for children involved a greater willingness to try new or previously disliked foods, improved confidence and competence in cooking skills, and perceived benefits in numeracy and literacy. Benefits for families included enhancing family bonding and quality time spent together. Overall, participation in the BRITE Box scheme improved eating behaviours, buffering sensory preferences and facilitating greater family cohesion in neurodivergent households.

Epilepsy and seizures in young people with a range of pathogenic neurodevelopmental CNV's: Prevalence and associations with neurodevelopmental disorders

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Objective: Amongst copy number variants that increase neurodevelopmental and psychiatric risk (ND-CNV's), 22q11.2 deletion syndrome and 16p11.2 deletion and duplication have been associated with epilepsy, and neurodevelopmental associations have only been explored in 22q11.2 deletion syndrome. This study is the first to elucidate the prevalence of epilepsy, and associations with neuropsychiatric risk, across a wide range ND-CNV's.

Methods: Parents/guardians of 656 children with pathogenic ND-CNV's (mean age 12.0 years) and 247 sibling controls (mean age 12.2 years) completed a validated epilepsy screening questionnaire, and parents/guardians and children completed assessments of IQ, neurodevelopmental and psychiatric symptoms, and sleep health.

Results: 10.15% (55/541) of all ND-CNV carriers had an epilepsy diagnosis (controls 0.51%, p=<0.001), and 58.1% (323/556) had experienced a seizure-like symptom (controls 14.4%, p=<0.001). Presence of a seizure-like symptom was associated with attention-deficit/hyperactivity disorder (OR 1.72, P=0.005), autism spectrum disorder (OR 2.60, P=<0.001) and more anxiety symptoms (OR 1.71, P=0.005), as well as more sleep difficulties (B = 0.85, P=<0.001) and poorer motor-coordination performance (B = -6.79, P=<0.001).

Significance : These results show the increased prevalence, and associations with neurodevelopmental and psychiatric function, of epilepsy in ND-CNV populations. These insights will be useful for diagnosis, therapeutic treatment and prognosis of epilepsy in ND-CNV populations.

Abstracts for Poster Presentations

Literacy Support for Children: Focus on Policy and Practice for Diverse Learners

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All children need high quality learning opportunities that support literacy regardless of disability status. Policy guidance can be helpful in supporting these children. In 2006, the UK Government released the Rose Report on literacy instruction in English for beginning readers in the early years. Fifteen years later the UK Government released another report: “The Reading Framework: Teaching the Foundations of Literacy. While the focus of these reports is literacy instruction in classrooms in England they contain general guidance on instruction in English, and broader guidance on equitable and inclusive practices, that is useful elsewhere. We used basic content analysis to explore changes in policy across these reports as they relate to disability. We anticipated that increased awareness of the importance of equitable and inclusive education around the globe (e.g., via the United Nation’s SDGs) might be reflected in the latter report. The results from our analysis indicated increased frequency of use for terms relating to disability in the later report. Moreover, the later report includes additional and more specific recommendations to ensure that diverse learners are included in, and benefit from, high-quality evidence-based literacy instruction in English.

Parents views on shared-book reading at home with their children with Down syndrome

Joanne Arciuli*, Tess Barich, Annemarie Murphy

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We worked with children with Down syndrome and their parents who were interested in taking part in a family-centred literacy instruction program delivered over several months to an instruction group versus a control group. In this program a computer-based literacy program was delivered online by a facilitator working in sessions with children where a parent was also present. In addition, prior to the beginning of the program, parents were given training in shared book activities to undertake at home outside of facilitated sessions using digital readers. Parents were invited to complete logbooks each week regarding their child’s progress during shared book reading activities. At the end of the program parents were invited to fill out an anonymous survey and could opt in to an extended interview after completing the survey. Here we focus on the results of the parent-led shared book reading activities using data obtained via the logbooks, survey, and interviews. Parents were generally positive about the program and the effects it had on their children and expressed the view that they learned a lot about literacy acquisition as a result of their participation. Parents provided feedback on ways to improve delivery of such programs.

Exploring the personality traits associated with hyperfocus in the general population

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Hyperfocus describes an intense state of sustained concentration on a task, stimulus, or object, accompanied by diminished awareness of the self, time, and surroundings. It is frequently discussed alongside ADHD and, to a lesser extent, autism—both of which involve heterogeneous differences in executive functioning (EF) and reward sensitivity (RS). The prevalence of trait hyperfocus in subclinical populations remains unclear, as does the extent to which EF and RS are related to variation in hyperfocus experience in the general population. This study aimed to (1) examine the prevalence of trait hyperfocus in the general population and (2) investigate the relationship between EF, RS and trait hyperfocus. Eighty-three participants (F=59; M=21) aged 18-70 completed measures of trait hyperfocus, neurodevelopmental

traits, EF and RS. Key results showed that trait hyperfocus was positively correlated with ADHD traits, autistic-like traits, poorer EF, poorer attention control and increased temporal reward discounting. Only ADHD traits significantly predicted hyperfocus when neurodevelopmental traits, EF and RS were included as predictors. Findings add to our understanding of hyperfocus within subclinical populations and identify the importance of self-reported EF and task-based RS.

Increased risk of provisional premenstrual dysphoric disorder (PMDD) among females with attention-deficit hyperactivity disorder (ADHD): A cross-sectional survey study

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Background: ADHD is historically under-recognised among girls and women; little is known about female-specific factors, including changes in ovarian hormones.

Aims: We investigated whether females with a self-reported clinical diagnosis of ADHD are more likely to experience provisional PMDD. We also examined associations between PMDD and ADHD defined by symptom and impairment thresholds.

Method: Participants (N=715), aged 18-34 years and assigned female at birth, were recruited via Prolific.com. Participants self-reported clinician diagnoses of ADHD, depression, and anxiety. ADHD symptoms were assessed using the Adult ADHD Self-Report Scale (ASRS), to which we applied a DSM-5-based cut-off ("ASRS-based" ADHD). PMDD symptoms were assessed using the Premenstrual Symptoms Screening Tool (PSST). Poisson regression models compared PMDD risk among females with ADHD (self-reported clinical diagnosis (N=102) or ASRS-based (N=229)) to a non-ADHD reference group (N=305). We also compared risk among individuals with ADHD and depression/anxiety diagnoses, ADHD only, and the non-ADHD reference group.

Results: PMDD prevalence was higher among individuals with self-reported clinical ADHD (31.4%) and ASRS-based ADHD (41.1%) compared to the non-ADHD group (9.8%). Individuals with ASRS-based ADHD and depression/anxiety diagnoses were at highest risk (RR=4.53 [3.10, 6.61]).

Conclusions: Clinicians should recognise the increased likelihood of PMDD in individuals with ADHD. Future research should explore the mechanisms linking ADHD and hormonal sensitivity disorders like PMDD.

Exploring Rumination in Children with Rare Genetic Conditions and Neurodevelopmental and Psychiatric Outcomes

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Background: Children with rare neurodevelopmental genetic conditions are highly vulnerable to developing a range of psychiatric outcomes. A current gap in our understanding to the psychiatric profiles of these conditions is rumination. Rumination is defined as repetitive thinking and unproductive dwelling on themes.

Aim: In this work we explore rumination in young people with rare neurodevelopmental genetic conditions and possible associations with co-occurring neurodevelopmental and psychiatric conditions.

Method: 461 children with a genetic condition (M=11.2 years, SD=3.01, 53.5% male) and 187 siblings with no known genetic condition (M=10.7 years, SD=2.85, 60.3% male) were identified via NHS medical genetic clinics and patient charities as part of the national ECHO and IMAGINE-ID studies. Children were assessed using the parent-report Child and Adolescent Psychiatric Assessment (CAPA), providing DSM-5 diagnoses.

Results: Rumination was reported in 33.4% of children with a genetic condition, compared to 4.8% of controls ($\chi 2=56.26$, df=1, p=6.34x10-14). In these children, rumination was associated with anxiety (OR=3.00, p=<0.001), ADHD (OR=2.09, p<0.001), autism (OR=1.97, p=0.004) and depression (OR=4.42, p=0.005).

Conclusion: Our findings highlight rumination as an important feature requiring clinical attention. Furthermore, it highlights rumination as a transdiagnostic trait across psychiatric diagnoses in children with rare genetic conditions, potentially a target for intervention.

Using Experience-Based Co-Design to explore stakeholders' experiences of conducting research with autistic people who have complex additional support needs

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Autistic people with complex support needs (ACSN) remain underrepresented in research, due to challenges adapting research processes to be accessible for individuals with minimal spoken language and/or intellectual disabilities. A scoping review we conducted found participants were often excluded when perceived as unable to cope with or understand task demands. Collaborating with the community is critical to ensure research meaningfully meets their needs.

Experience-Based Co-Design (EBCD), used in healthcare to improve care pathways, involves capturing stakeholder viewpoints to guide discussion and collaboratively develop solutions. We partnered with autism researchers, school professionals, children, and families using video observations, interviews, and focus groups to explore EBCD in special education settings.

We will discuss the challenges of participatory research in special schools and how we have addressed them. Stakeholder experiences in research processes and examples of ongoing co-design efforts will be shared. Finally, we will present adaptations and recommendations that have emerged from the project.

Co-design methodologies reshape research tools and procedures to be more inclusive and accessible for ACSN and other underrepresented groups. Collaborating with communities helps ensure research approaches remain reflective, relevant, and aligned with the priorities of those most impacted.

The association between sleep, autism and anxiety in fragile X syndrome

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Background: Sleep difficulties, anxiety and autism are highly prevalent in people with fragile X syndrome (FXS). Investigating syndrome-specific anxiety and autism profiles and their association with sleep is essential to understanding the complex interplay of co-occurring conditions within FXS.

Aims: This study aimed to (1) determine the prevalence of sleep difficulties in FXS, (2) evaluate co-occurrences of sleep difficulties, anxiety, and autism, and (3) evaluate sleeping profiles in people with FXS with and without co-occurring autism and anxiety.

Methodology: Parent-reported sleep difficulties, autism and anxiety were assessed using the Child Sleep Habits Questionnaire, the Social Communication Questionnaire and the Anxiety, Depression and Mood Scale, respectively, in 63 participants with FXS.

Results: 98.76% of people with FXS participants presented with sleeping difficulties. Fisher's tests and linear regressions showed no association between sleep, autism and anxiety. Sleep Onset Delay was reported as the greatest sleep difficulty in people with FXS. Participants with co-occurring autism and anxiety experienced greater sleep difficulties compared to people with FXS without co-occurring conditions.

Conclusion: Sleep difficulties are highly prevalent in people with FXS. Although additional work is needed, people with FXS and co-occurring conditions (i.e., autism, anxiety) appear to experience more severe sleep difficulties.

Educational Professionals' Perspectives on the Social-Emotional Experiences of Adolescents with Reading Difficulties: a Focus Group Study

Jovana Durica and Dr Debbie Gooch

University of Surrey

Reading difficulties have been associated with anxiety in cross-sectional and longitudinal studies. Additionally, there has been investigation into third factors that may mediate the relationship between reading difficulties and anxiety. However, limited research has explored why and how these third factors manifest. There has also been limited investigation into these factors during adolescence, which is widely recognised as an exceptionally stressful period of life.

The current study addresses these gaps in the literature by using a qualitative approach to understand the unique experiences of adolescents who have reading difficulties by gathering views of educational professionals who work closely with them. Seven focus groups composed of a total of 20 educational professionals were completed to explore views on factors that influence the social-emotional wellbeing of secondary school adolescents with reading difficulties.

Thematic analysis of focus group data revealed themes around risk and protective factors for developing anxiety at the individual, family, community, and societal level. These themes will be discussed in detail along with implications of the findings and future directions.

Experience Sampling Research in UK schools - an exploration of perceived barriers and facilitators

Louise Glanville, Laura Biggart, Joni Holmes

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Experience Sampling Methodology (ESM) could enhance our understanding of factors that affect learning in school. However, ESM research is rarely conducted in UK schools; the methodology is used more often in America, Finland and Germany. Perceived barriers to, and facilitators of ESM research in UK schools were explored in two qualitative studies. In each study, participants were provided with the details of an ESM study a researcher aims to conduct in schools across the UK.

Study 1: Focus groups were conducted in a rural comprehensive school (N = 6), an inner-city comprehensive school (N = 5) and two suburban comprehensive schools (N_1 = 6, N_2 =7). In the focus groups, pupils (aged 11 to 13) discussed whether the proposed ESM study could be conducted in their school.

Study 2: Semi-structured interviews were conducted with staff in a rural comprehensive school (N = 7), an inner-city comprehensive school (N = 3) and two suburban comprehensive schools (N_1 = 2, N_2 =5). The interviews involved staff reflecting on whether the proposed ESM study could be conducted in their school.

A thematic analysis of these data is currently underway and will be completed in time to present via a poster at NDAS2025.

Whispers of attention in the classroom: a pilot study investigating ASMR to support ADHD-associated issues in kindergarten children in UAE.

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During the kindergarten years (4-6 years) children often exhibit attentional challenges similar to those observed in attention deficit hyperactivity disorder (ADHD). The autonomous sensory meridian response (ASMR) has shown promise in enhancing self-regulation and attentional focus. This pilot study explored the potential of ASMR as an intervention to support attentional issues associated with ADHD in kindergarten students. Thirty-eight participants (mean age 66 months) were divided into ASMR (n=18) or Cartoon (n=20) viewing groups. Over one month, a 5-minute ASMR or cartoon video was incorporated into their daily school routine. The study employed the ADHD RS-IV Preschool rating scale, the Attentional Control Scale for Children, and a Sustained Attention to Response Task (SART). Teacher rating scales indicated a significant improvement in attentional control post-intervention for the ASMR group only. ADHD traits significantly predicted attentional control pre-intervention but not post-intervention for both groups. Increased hits and faster RT observed in the SART post-intervention were non-significant when accounting for age, gender, and ADHD traits. Despite limitations such as a small sample size and a brief intervention period, this study lays groundwork for advancing research on ASMR as a potential support for attentional issues associated with ADHD in young learners.

Investigating the Prevalence and Profile of Attention-Deficit/Hyperactivity Disorder (ADHD) in Children and Young People with Sturge-Weber Syndrome

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Background: Sturge-Weber syndrome (SWS) is a rare vascular disorder, associated with neurodevelopmental differences, including intellectual disability and attention deficit hyperactivity disorder (ADHD) symptoms. However, ADHD characteristics often go unrecognised/undiagnosed, with related difficulties attributed to SWS without considering other explanations. Research into ADHD in SWS is limited and variable, and the clinical utility of commonly used ADHD assessment measures (Conners-3 & CPT-3) has not been evaluated for this population.

Methods: A secondary data analysis was conducted using data from a UK SWS specialist clinic database (N=142, Mean age= 12 years; SD=3.6). Data on ADHD, autism, intellectual disability, epilepsy diagnoses, participant demographics and scores on the Conners-3 and CPT-3 were extracted from the database.

Results: 19% of children with SWS had an ADHD diagnosis. Most children presented with combined ADHD symptoms, compared to inattention and hyperactivity alone. ADHD was significantly associated

with autism and intellectual disability, but not with epilepsy, age or gender. Conners-3 and CPT-3 evidenced high specificity and positive predictive values, but low sensitivity and negative predictive values.

Conclusions: Findings enhance understanding of ADHD profiles in SWS and highlight the need for timely assessment to reduce diagnostic overshadowing. The utility of standard ADHD tools may be compromised in this population.

Could an online virtual world (EVA Park) be used for delivering speech and language therapy to autistic children?

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EVA Park is a virtual world designed for Speech and Language Therapists (SLTs) to deliver online sessions to people with communication needs. This project investigated whether EVA Park might be suitable for young autistic clients, by gathering preliminary feedback from potential users. Four autistic children aged 9-11 years and five SLTs met individually with a researcher for a trial session in EVA Park, including a demonstration of potential therapy activities. Following this, participants' views were obtained via semi-structured interviews.

The young autistic participants all enjoyed their sessions in EVA Park, although views on technical aspects (e.g., graphics, controls) were mixed. Feedback on suggested therapy activities was positive overall; however, children did not think that virtual therapy should completely replace face-to-face sessions. The SLTs also varied in their opinions on the technical features of EVA Park, but all agreed that it would be a useful clinical tool. Numerous advantages to using a virtual therapy environment with autistic children were identified, although potential disadvantages and barriers were also discussed. Both groups suggested changes that could make EVA Park more appealing to autistic users. Overall, EVA Park shows strong potential for delivering SLT interventions to autistic children, but further development is required.

"Keeping People in Limbo" - Parents' experiences of waiting for an ADHD assessment with CAMHS in England

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Parents seeking an assessment and diagnosis for ADHD for their child may experience a significant wait before receiving an appointment with Child and Adolescent Mental Health Services (CAMHS). Delays in treatment may exacerbate symptoms in the child, as well as impact on parents' wellbeing. The study aims to understand parents experience of the time that they spend on a CAMHS waitlist and associated implications.

N=41 parents who had taken part in a larger RCT (OPTIMA) were interviewed at the end of their 12 months period with the study, during which time they had been waiting for an ADHD assessment for their child. 49% of these parents were still waiting to be seen. Using thematic analysis, an overarching theme of feeling in limbo emerged, with sub themes focusing on the communication and support received, impact on parent and child mental health and parents' expectations of the service, such as improved communication and aftercare.

Our findings suggested that while parents realised that there were broader implications to lengthy waitlists that they could not influence, parents could benefit from regular and consistent communication from

CAMHS regarding their position on the wait list as well as adequate signposting and aftercare from the services. Parents wanted to feel validated by the services.

The cognitive and psychiatric trajectories of children with rare neurodevelopmental genetic conditions: longitudinal findings from the IMAGINE-ID study

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Rationale: Parents of children with a neurodevelopmental rare genetic condition often ask, “What does this diagnosis mean for my child?”. IMAGINE-2 addresses this research gap, conducting a longitudinal study of this group across development.

Aims: Characterising the developmental trajectories of children with rare neurodevelopmental genetic conditions in comparison to control siblings without a known variant.

Method: 328 children with genetic conditions (Age: T1=9.66, T2=13.31) and 100 control siblings (Age: T1=10.55, T2= 14.22) were recruited via NHS genetic clinics and patient charities. Children were assessed longitudinally via the CAPA (psychiatric symptoms) and the WASI (IQ). Linear mixed models were used to contrast developmental trajectories between children with genetic conditions and controls.

Results: The children with genetic variants displayed significantly greater ADHD (β=7.42, $p < .001$), anxiety (β=3.75, $p = .028$), mood symptoms (β=2.56, $p = .022$), and lower IQ scores than controls (β =-16.78, $p <.001$) across development. For performance IQ, difference from controls increased over time indicating a developmental lag.

Implications: IMAGINE-2 represents a large-scale longitudinal study of children with rare neurodevelopmental genetic conditions. This vulnerable group experienced persistent psychiatric symptoms across development and an increasing cognitive deficit relative to controls, highlighting a need for greater clinical and educational support.

Thematic Analysis of parental views on the outcome of their child’s neurodevelopmental assessment for Autism and ADHD.

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Mantle Psychology Ltd

This study will examine the opinions of parents seeking a neurodevelopmental assessment for Autism and/or ADHD for their children, regarding their views on the potential outcome. Participants are being asked to share their thoughts on receiving a diagnosis or not receiving a diagnosis, as well as the reasons behind their responses. Recruitment for participants is through social media in groups for parents are seeking information about assessment routes. Thematic analysis will used to identify main themes within the data, this will explore (1) do parents feel more positive about their child receiving a diagnosis or a non-diagnosis, (2) reasons for their positive or negative responses, and (3) what parents feel would be the short-term and long-term impact of receiving a diagnosis or non-diagnosis. The implications of this research will highlight parents' perceptions of the need for neurodevelopmental assessments and increase awareness of the narrative and support surrounding a diagnosis or non-diagnosis.

How Much Do Press Representations of Autism Influence Public Attitudes Alongside Other Factors?

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A major determinant of autistic people's well-being is feeling accepted. However, the Press, which often portrays autism in negative and stereotypical ways, can undermine its public acceptance. This study investigated how the quality of newspaper reporting influences public attitudes toward autism, alongside other known factors such as demographics and autism knowledge. A total of 277 UK-based non-autistic adults completed an online survey. Participants reported their newspaper reading habits, including frequency and trust in 10 major newspapers. Autism knowledge and explicit attitudes were assessed through questionnaires, while implicit attitudes were measured using an Implicit Association Task. Generalised Additive Models were used to examine predictors of attitudes, with data weighted by overall newspaper exposure. Hierarchical partitioning identified the proportion of variance in attitudes explained by each predictor. The models accounted for 51% of the variance in explicit attitudes and 33% in implicit attitudes. Higher trust in right-leaning tabloids was associated with more favourable explicit attitudes, but frequent reading of these outlets predicted more negative implicit attitudes. Overall, reading behaviours explained 3.7% of explicit and 9.1% of implicit attitude variance. These findings highlight media exposure as a meaningful and measurable influence on public attitudes toward autism, beyond demographic or knowledge-based factors.

Profiling everyday memory functioning across the Autism and ADHD spectrums

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While alterations in attention and executive functions are well-established in neurodiverse individuals, possible effects in declarative long-term memory (LTM) across the autism and ADHD spectrums remains under-researched. ADHD-related declarative memory deficits are often linked to encoding difficulties, whereas autism-related deficits are associated with retrieval. Interestingly, sensory processing sensitivity (SPS) and problems with attentional control, traits strongly associated with both conditions, have also been linked to memory deficits. This study examines the impact of autism and ADHD traits on LTM across the general population, exploring how different domains (episodic vs. semantic) and modalities (verbal vs. visual) are affected. A quantitative correlational design in adults aged 18+ years will assess these relationships using validated questionnaires. An exploratory approach, including series of regressions, will provide insight into the complex dynamics between autism/ADHD traits and self-assessed memory. Data collection is ongoing; preliminary findings may be presented during the conference.

Systematic literature review of instruments measuring anxiety symptoms in people with intellectual disability

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King's College London

Introduction: Anxiety disorders are more prevalent in children and young people with intellectual disability (CYP+ID) than the general population[1–4]. Yet, anxiety disorders in CYP+ID are often unidentified, in part due to the use of unsuitable instruments.[5–7] This systematic literature review, therefore, aims to identify questionnaires that accurately rate anxiety symptoms in CYP+ID.

Method: PROSPERO-registered, this review adhered to PRISMA guidelines. The studies' psychometric methods and risk of bias, and instruments' accuracy were evaluated.

Results: The twelve studies published since 2010 that qualified for inclusion assessed thirteen questionnaires. No instrument was shown to demonstrate adequate sensitivity and specificity. Five studies included a broad age range; one evaluated age-based measurement invariance. Three instruments met known-groups psychometric assessment criteria. Investigations of convergence with anxiety instruments developed for the ID or general populations and tests of discrimination with measures of mood, irritability, pain, and general physical health also met the criteria.

Discussion: While there are several promising measures, there is insufficient evidence to support using the questionnaires reviewed to screen for anxiety disorders in CYP+ID. Measurement invariance studies are needed to confirm the accuracy of the measures for different age groups, genders and ID levels of CYP+ID.

"They Just Want to Be Seen": A Qualitative Exploration of Practitioners providing Mental Health Therapies to Autistic Children and Young People

Jaimie Leung and Lisa Thackeray

University College London, Anna Freud

Children and young people (CYP) with Autism and Learning Difficulties (LD) face significant and persistent barriers in accessing appropriate mental health services. These challenges are compounded by systemic issues, including a lack of tailored interventions, resource constraints, and insufficient training for professionals to meet the complex needs of this population, reinforcing the need to improve facilitators for access. The Children and Young People's Improving Access to Psychological Therapies (CYP-IAPT) program aims to address these gaps by promoting evidence-based practices and collaborative care approaches. This study explores the experiences of CYP-IAPT Recruit to Train students and alumni specializing in the Autism and LD pathway, focusing on their unique perspectives and experiences of barriers and facilitators faced by CYP in accessing services. Through semi-structured online interviews, 6 participants highlighted the complexities of navigating service systems, the role of feedback in adapting care to individual needs, and the challenges of implementing meaningful changes within clinical and systemic contexts to improve accessibility and quality of mental health care for CYP with Autism and LD. This research contributes to the ongoing dialogue around reducing inequities in mental health service provision for neurodiverse populations.

Narrative speech fluency in Down syndrome: Disfluencies, language and cognitive abilities in adolescents and adults

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Down syndrome is a neurodevelopmental disorder associated with intellectual disability, as well as considerable risks for communication and language disorders. Expressive abilities are particularly vulnerable in this population, often presenting difficulties with overall speech fluency, including higher occurrence of stuttering. However, few studies to date offer direct comparisons of speech fluency in Down syndrome and typical populations.

In this study, language samples were elicited using the MAIN narrative task (Gagarina et al., 2019) from 32 participants with Down syndrome (DS) aged 15-42 years. Speech fluency (stuttering and non-stuttering disfluencies) was compared to that of a control sample of 33 younger typically developing (TD) children, aged 4-14 years and matched on mean length of utterance (MLU).

Results show that individuals with DS demonstrate significantly higher proportions of both disfluency types, while TD children mainly show non-stuttering disfluencies. Amongst participants with DS, males exhibited

significantly higher rates of disfluency across stuttering and non-stuttering. Results also suggest that language and cognitive skills modulate the occurrence of speech disfluencies in individuals with DS.

In sum, individuals with DS show more and different types of disfluencies than expressive-language matched controls, with fluency linked to language and cognitive skills.

A mixed-methods exploration of school staffs' experiences of multi-sensory environment use with neurodivergent students

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Multi-sensory environments (MSEs) are widely used in schools to support neurodivergent students. Little is known about how staff use them, why they are used, or students' involvement in decision-making around their use. Exploring different staff experiences with MSEs can identify common practices and areas of support. Using a mixed-methods online survey, with a minimum projected sample of 90 UK-based staff, the study aims to answer:

1) How does type of MSE use vary across school provision and staff role type?

2) Is there a significant difference between educator, support, and therapy staff in

    a. How frequently the MSE is used and
    b. What purpose is the MSE being used for?

3) Are there significant correlations between

    a. MSE use, time since staff qualification, and self-efficacy and
    b. MSE use, confidence and training level?

4) To what extent are neurodivergent students being consulted on how MSEs are designed and used in their schools?

Findings can inform the design of a pilot staff training program on how to use MSEs effectively and safely with neurodivergent students. Findings will further inform the methodology and design considerations on subsequent studies to create co-produced resources for schools on MSE design and use.

'We have immense affection for the people that worked in that hospital': a retrospective qualitative interview study on parenting a preterm or developmentally delayed child in lockdown

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Background: The BICYCLE (Born in Covid Year – Core Lockdown Effects) study is testing language and executive function of children at age four. A purposive sample of their parents are also taking part in qualitative, semi-structured interviews exploring their pregnancy, birth and parenting experiences. Children with suspected/diagnosed global delay and/or born before 32 weeks' gestation are excluded but further insights from their parents may provide rich and complementary data.

Methods: A convenience sample of five parents were recruited by email because they had expressed interest in the BICYCLE study, their children were born during the strictest lockdown and they had given permission to be recontacted. Zoom interviews were conducted and audio recorded and transcribed with permission. Themes were extracted and analysed using Framework Analysis.

Results: Four mothers and a father were interviewed; full demographics will be presented. Emerging themes included: empathy and admiration for clinical staff, frustration with the wider healthcare system and celebrating children's milestones and achievements. Further themes and verbatim quotes will be presented.

Discussion: Challenges for parents of preterm babies and/or children diagnosed with global delay were twofold as they dealt not only with their child's condition but with a healthcare system stretched by responding to the pandemic.

Women's experience of autistic burnout: A thematic analysis of reddit

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Autistic girls and women are underdiagnosed and less likely to receive essential support, accommodation and interventions. They are at greater risk to develop internalising disorders such as depression, anxiety or eating disorders. They also often engage in camouflaging or masking autistic traits to appear more neurotypical and avoid stigma and ostracisation. As a result of missed or misdiagnosis, chronic life stress and the cost of masking, autistic female are at risk of autistic burnout. Despite evolving research effort, the autistic burnout is still perceived as a 'nebulous phenomenon' which requires further definition. In this study, 149 posts from the social media Reddit containing the keywords 'female autistic burnout' were subjected to thematic analysis. Following a collaborative discussion, four themes were constructed: 1) an acknowledgement of the challenges generated by a lack of knowledge and understanding of both female autism and autistic burnout; 2) the toll of trying to fit in a neurotypical world; 3) the report of progressive stages in the phenomenon of burnout; 4) the expression of a 'non-existence ideation' as opposed to a suicide ideation. Our findings highlight the role of mis- and missed diagnosis and masking in autistic burnout, and portray autistic burnout as a multi-dimensional construct.

Beyond the Here and Now: Theory of Mind, Episodic Memory, and Episodic Future Thinking

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Background: The ability to integrate different types of self-related information is fundamental to forming a self-concept that organises past experiences and future possibilities into a cohesive representation of the self that spans time. Mentalising - the ability to understand and represent alternative mental states – might play a significant role in self-referential cognition by providing a mechanism for representing alternative selves across the past and future. However, limited studies have directly explored these cognitive mechanisms in autistic people, and the relationship between these abilities remains unclear.

Aims: This study explores how autistic and non-autistic people differentiate between their representations in physical and psychological domains over time through carefully controlled tasks that vary only in the type of representation required. Additionally, it examines the relationship between mentalising and past and future thinking.

Methods: This study employed a between/within-group design involving 40 autistic and 41 non-autistic adults matched for age and IQ. Participants engaged in an adapted present self-reference effect (PSRE) task, in which they made judgments about themselves across three temporal frames: past, present, and future. Reaction times and accuracy were calculated for the PSRE task. Additionally, they completed a

mentalising task using a strange stories film. These tasks were designed to assess both psychological and physical self-referential processing.

Results: Research results for the PSRE task indicated that response times for psychological words were longer than for physical words in both groups. Additionally, there was a significant group difference in accuracy for psychological future words, with the autistic group showing lower performance than the non-autistic group. Furthermore, mentalising and future thinking were found to be positively correlated.

Conclusion: This study implies that autistic people may exhibit unique variations in how they represent their physical and psychological future selves. Mentalising is potentially a contributing factor to the psychological aspects of self-concept.

Selective Mutism in Children and Young People with Rare Neurodevelopmental Genetic Conditions

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Rationale: Children with rare neurodevelopmental genetic conditions present with a range of psychiatric conditions. Despite their psychiatric vulnerability, there has been very little investigation into selective mutism (SM) within this group.

Aims/research questions: This project evaluates SM symptoms in children with rare neurodevelopmental genetic conditions, exploring associations with neurodevelopmental and internalising conditions.

Methods: Children with rare neurodevelopmental genetic conditions were identified for the national ECHO and IMAGINE-ID studies via NHS medical genetic clinics and charities. Parent report questionnaires and child and adolescent psychiatric assessments (CAPA) informed DSM-V diagnoses and symptom profiles for 513 children with genetic conditions and 237 sibling controls (mean age 10.9 years).

Results: SM symptoms were significantly more prevalent in children with genetic conditions (8.38%) compared to sibling controls (2.95%; $p=0.009$). In those with genetic conditions, SM was associated with both anxiety (OR=5.04, $p<0.001$) and autism (OR=2.70, $p=0.018$), but not with mood disorder or ADHD.

Implications: It was found that children with rare neurodevelopmental conditions were more likely to experience SM symptoms than their siblings, and these were indicative of neurodivergence and anxiety. This suggests SM symptoms could act as early indicators for individuals in this group that may benefit from early-stage mental health intervention.

Better Functional Gains Through Early Autism Intervention

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Autism Spectrum Disorder (ASD) is a lifelong condition that affects how a child communicates and interacts with others. When identified early during the brain's most adaptable stage, structured intervention can make a meaningful difference in the child's development and long-term well-being.

This case shares the journey of a 7-year-old Malay boy who was diagnosed with ASD at the age of 2. He was born healthy and full-term. Around 18 months, his parents noticed early signs such as a lack of speech, no response when called, limited eye contact, and repetitive behaviours. He was referred promptly and assessed by a multidisciplinary team.

From there, he received early and targeted therapy including speech, occupational, and behavioural support. At age 7, he has made significant progress. He can now use short phrases to communicate, attends a special education class, and engages more effectively with familiar adults. While he struggles with abstract language and peer interaction, his attention span, daily functioning, and social connections have improved. His mother has played a key role by actively supporting his therapy and maintaining consistent routines at home.

This case shows how early identification and family involvement can significantly improve outcomes for children with autism.

Sensory differences across six modalities and three levels in autistic adults, neurotypical adults, and individuals with ASC/ADHD traits

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This study examined sensory processing in neurodiverse individuals using a novel questionnaire based on He et al.'s (2023) hierarchical sensory model in autism. The questionnaire assessed three levels, perceptual sensitivity (intensity of detection), affective reactivity (how pleasant or unpleasant input feels), and behavioural responsivity (tendency to seek or avoid input), across six sensory modalities: auditory, visual, tactile, taste, smell, and vestibular. A total of 502 adults participated: 199 autistic adults, 208 neurotypical adults, and 95 individuals with ASC/ADHD traits (identified via CATI and ASRS scores). Internal consistency for the three theoretical constructs was acceptable (α: perceptual=.909; affective=.776; behavioural=.766). Factor scores were calculated using the theory-driven model. In the autistic group, Bayesian ANOVAs showed numerically higher perceptual factor scores in all modalities except vestibular and visual; lower affective factor scores in auditory, tactile, and visual modalities; and lower behavioural factor scores in all modalities except smell. Higher factor scores in perceptual reflect greater sensitivity, in affective reflect perceiving stimulation as more pleasant, and in behavioural reflect greater sensory seeking. These findings suggest the three constructs, particularly perceptual sensitivity, may represent distinct dimensions of sensory processing. Further research is needed to confirm the structure and validate the questionnaire.

Can we harness curiosity to boost word learning in neurodivergent children?

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When people are curious, they remember more. Researchers suggest that people's curiosity could be key to enhancing their learning, with clear implications for education. Does curiosity facilitate word learning in all children, including neurodivergent children? To address this question, we recruited children aged 8-11 (neurotypical N=18, neurodivergent (developmental language disorder, autistic) N=14). In session 1, children encountered items from the curriculum (e.g., history, geography, science) in a game. For example, "What does this word mean? --- Peregrination". They rated their curiosity for each item, using a scale designed for children. Later, we gave them a choice about whether they wanted to learn the answer – if they chose to see the answer, they would have to wait 10-25 seconds before viewing it. The next session was a week later; we assessed how well they remembered the answers they chose to view. Preliminary

findings indicate that all children were more likely to wait to receive an answer when they expressed curiosity. Further, they were more likely to remember that answer. These results suggest that curiosity is an important driver for advancing learning and education.

Relationship between Self-Injurious Behaviour and Neuropsychiatric Outcomes in Young People with Rare Genetic Conditions

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Rationale: Self-injurious behaviour (SIB) is a chronic issue often heightened in children with neurodevelopmental conditions. However, there is limited research into SIB in children with rare neurodevelopmental genetic conditions who are vulnerable to mental health problems.

Aims: We investigated whether children with genetic conditions exhibit higher rates of SIB than control siblings without a genetic diagnosis and whether SIB is associated with neuropsychiatric outcomes.

Methods: 521 children with a known genetic condition (40.2% female; M =10.7 years) and 236 sibling controls (49.3% female; M=11.3 years) from the IMAGINE-ID and ECHO cohorts were assessed for psychiatric outcomes using the parent-reported Child and Adolescent Psychiatric Assessment and the Social Communication Questionnaire.

Results: SIB was significantly more prevalent ($\chi 2=585.78$, $p<0.001$) in children with genetic conditions (14%) compared to their sibling controls (5%). SIB in children with genetic conditions was also significantly associated ($p=<0.001$) with autism (OR=3.52), ADHD (OR=2.67), anxiety (OR=2.96) and mood (OR=5.05) disorders.

Implications: We identified that SIB is more prevalent in children with rare genetic conditions and is associated with a range of neuropsychiatric outcomes. These findings highlight SIB as a vulnerability marker for mental health problems in children with rare genetic conditions and may represent a potential early intervention target.

Self-reported adult dyslexia traits predict cognitive failures in the workplace: An online survey of Prolific users

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Despite the need to support neurodivergent workers through targeted accommodations, little is known about how dyslexia-related cognitive difficulties express themselves in employment settings. The current study, a pre-registered online survey, represented a preliminary investigation into the relationship between dyslexia traits and typical workplace cognitive performance. It focused on the self-reported frequency of cognitive failures at work. Four hundred native English speakers identifying as working full- or part-time in a central place of work in the UK (female = 232, male = 166, mean age = 40 years [SD = 12]) were recruited via Prolific and completed previously published questionnaires. After controlling for age, busyness and routine at work, Big Five personality traits, mental wellbeing, and self-reported ADHD symptoms, hierarchical regression models indicated that dyslexia traits were significant positive predictors of the overall frequency of workplace cognitive failures and of the three individual cognitive failures factors (Memory, Attention, and Action). Other significant predictors of workplace cognitive failures were ADHD symptoms and Busyness at Work (both positive) and Conscientiousness (negative). The findings suggest

that a similar approach with individuals with verified dyslexia diagnoses would prove fruitful in understanding how dyslexia specifically affects work performance and, from there, improving support for dyslexic employees.

Documenting Queer and Disabled Lived Experiences and Values Through Art

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The proposed project explores Queer and Disability identity through a mixed-method approach, including multimedia photovoice (Study 1), focus groups (Study 2), and a survey (Study 3). The empirical goal is to document holistic identity experiences, highlighting both societal minoritization and prideful self-expression. Focus groups (Study 2) will discuss artwork created in Study 1, clarifying overarching themes, sharing personal narratives, and discussing systemic barriers contributing to social exclusion. These discussions are also expected to reveal factors that foster community belonging and identity affirmation. The project's community-oriented goal is to showcase diverse identity expressions through an art show. At this event, Study 3 will engage community members in validating themes from Studies 1 and 2 through brief survey measures on the displayed pieces. Methodological approaches (including phenomenology, participatory action research, and mixed-method sequential and convergent design) demonstrate how diverse frameworks can enhance research on neurodiversity and lived experience. For disabled and autistic individuals, non-verbal methods improve accessibility and can integrate personal/special interests, enriching the understanding of their identity and making the participation itself more meaningful. While grounded in Hawai‘i and informed by local values, this framework has broad applicability, offering methodological insights for similar projects in diverse contexts.

Redefining Sleep in Autistic Young Adults

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Sleep difficulties are common in autistic individuals throughout their lifespan (Schreck & Richdale, 2020), often worsening during adolescence and adulthood (Goldman et al., 2017), and affecting approximately 80% of autistic young people (Øyane & Bjørvatn, 2005). Despite progress in research, sleep disorders in this population remain underdiagnosed and undertreated. As sleep issues in autistic youth differ from t seen in neurotypical peers (Baker et al., 2013), traditional sleep hygiene recommendations may be ineffective and new tailored approaches are necessary (Pavlopoulou, 2020).

This study investigated the unique sleep experiences and needs of autistic young adults aged 18 to 30 through semi-structured interviews analysed using thematic analysis. The findings highlight the importance of sensory strategies and personalised approaches to improve sleep in this group. Based on these insights, we then formed three advisory groups—comprising practitioners, autistic individuals, and autism-focused researchers—to co-develop the content of a specialised self-help sleep guide. Drawing on feedback from both the interviews and advisory groups, we created the self-help guide, which is currently being tested for feasibility. The resulting guide draws on core principles of Cognitive Behavioural Therapy for Insomnia (CBT-i), but extends beyond them to incorporate sensory-based strategies, autistic lived experience, and user-informed adaptations. This work underscores the need for tailored sleep interventions that reflect the specific challenges faced by autistic young people.

Exploring how neurodiverse undergraduate students can be best supported as they transition to university and throughout their degree

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Neurodiverse students such as those with autism or attention deficit hyperactivity disorder may experience greater challenges with transitioning to university and throughout their degree compared to neurotypical students. Challenges that these students face may relate to settling in and developing friendships with peers and/or relationships with staff, or in managing their work and deadlines. These challenges may negatively impact on students' wellbeing and mental health, as well as impacting on assessment submissions and academic performance. This may then affect students' ability to progress between years, and their degree completion, overall classification, and graduate outcome. Not providing students with appropriate support may therefore have a critical impact on a personal level, in addition to impacting on key university metrics.

To address these issues this project will use a mixed-methods approach to firstly explore the challenges that neurodiverse students face as they start their degree and as they progress through this, and secondly investigate the factors which may predict successful outcomes in these students. Understanding the challenges these students face and factors that predict student success will inform future strategies and interventions to best support neurodiverse students and their wellbeing, along with improving metrics relating to submissions, continuation, completion, attainment, and progression.

Vocal development across atypical developing children

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Recent developments have made it easier to collect long-form recordings using child-worn devices and to analyse the resulting audio automatically. In this poster, we consider how metrics extracted from automated analyses can describe early vocal development in children aged 0-6 years and potentially support clinical diagnosis and treatment. Previous studies have shown that long-form recordings are feasible and offer clinical value in studying atypical development (see Oller et al. 2010). The number of speech-like vocalizations varies not only with age but also across children's developmental profiles (e.g., Bergelson et al., 2023). Canonical Proportion (CP) — the ratio of canonical vocalizations to all speech-like vocalizations — has been found to show a different trajectory as a function of age for children with an Angelman Syndrome diagnosis versus infant controls (e.g., Semenzin et al., 2021). We also consider the crying ratio and basic acoustic features, which may broaden the scope of vocal analysis. Inspired by big team science (e.g., Bergelson et al., 2023), we invite potential collaboration on datasets representing diverse diagnoses to apply our technical knowledge of long-form recording to answer the following: Are some automated metrics particularly informative for certain diagnostic profiles?

Limitations and challenges of deaf autism assessment (DAA): Insights from parents and professionals

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Background: Deafness and autism are closely linked with language and social development. Due to this overlap, DAA has additional layers of complexity aiming to reduce misinterpretation of behaviours and differential diagnosis difficulties (Hodkinson et al., 2023; Phillips et al., 2022). Linguistic and cultural complexities present further challenges.

Methods: Using a qualitative, interpretative approach, this study gathers insights through focus groups and interviews with four National Deaf CAMHS professionals and four parents. Participants were recruited through professional and personal networks, deaf schools/provisions and social media, and asked about their experience of the DAA process. Thematic analysis will be employed to examine patterns within the data, ensuring rigour through supervisory review and anonymized transcript analysis.

Results: Preliminary findings provide perspectives into systemic limitations of the current process, including misinterpretation of autistic traits in deaf children, lack of standardized deaf-accessible tools, and challenges in communication between professionals and families. Results highlight the need for updated nationwide assessment frameworks and enhanced training for clinicians. These insights will inform clinical practice and future research aimed at enhancing DAA accessibility and diagnostic accuracy.