

Neurodiversity Digest



Issue No. 1 - July 2023

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We can undertake further evidence searches on your behalf if you would like additional information on any of the topics in the bulletin. Please contact holly.cook3@nhs.net for more details.

Compiled by John Gale, JET Library (Mid-Cheshire NHS Foundation Trust).

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Air pollution and ADHD

Source: Environmental Research

In a nutshell: When it comes to housing most people would rather live somewhere more akin to Constable's *Hay Wain* than a Formula 1 pit stop. But how does air and noise pollution affect people with ADHD and autism? That was the question a team of researchers, led by Yiran Li from the University of Groningen in The Netherlands set out to answer in this study of 2,750 children – aged between 10 and 12 – in The Netherlands. The researchers found that higher levels of exposure to particulate matter was associated with more severe ADHD and ASD symptoms, although there was no link between other air pollutants and noise and worse ADHD/ASD symptoms.

You can read the abstract of this article at: <https://doi.org/10.1016/j.envres.2023.115704>

How do mums cope when their child's in a home

Source: Journal of Autism and Developmental Disorders

In a nutshell: In this study a team of researchers, led by Madeline R. Horan, from St Jude's Children's Research Hospital in Memphis, studied 988 mothers of autistic children where the children were living in a "medical home." Having children living in a medical home is an established risk factor for worse mental health among mothers and the researchers wanted to find out why. They found that the relationship between having a child living in a medical home and mental health was "largely explained by indirect associations with coping and social support."

You can read the abstract of this article at: <https://doi.org/10.1007/s10803-023-05997-6>

Getting your help in early

Source: Journal of Autism and Developmental Disorders

In a nutshell: In this study Suzi J. Sapiets, from Warwick University, led a team of researchers studying 673 families of children with "suspected or diagnosed developmental disabilities." They found that developmental-disability diagnosis and caregiver educational level were associated with intervention access and access to early support. Access to early support was also associated with a child's physical health, adaptive skills, "caregiver ethnicity," informal support, and having a "statutory statement of special educational needs." Unmet need for early support was associated with economic deprivation, the number of household caregivers, and informal support. The researchers recommended "enhancing processes for formal identification of need, addressing socioeconomic disparities ... and providing more accessible services."

You can read the abstract of this article at: <https://doi.org/10.1007/s10803-023-05996-7>

Why you don't always need a diagnosis

Source: Culture, medicine and psychiatry

In a nutshell: I'm in awe of people who managed to get an ASD or ADHD diagnosis as an adult. How do they even get a GP's appointment, let alone cope with all that paperwork? In this study Lior Tal, from Bar-

Ilan University and Yehuda C. Goodman, from the Hebrew University of Jerusalem, interviewed people who had been diagnosed with ADHD as adults. The interviewees said that they had experienced “otherness,” without a diagnosis but that this had had some benefits. By detaching them from medical and social expectations it had allowed them to nurture a unique outlook on life, develop personal knowledge, and “invent therapeutic interventions.” The researchers concluded that “the timeframe [before a diagnosis] that psychiatry conceives as harmful has been, for some, a springboard to find their own way.”

You can read the abstract of this article at: <https://doi.org/10.1007/s11013-023-09825-5>

Mindfulness and ADHD

Source: Applied Neuropsychology: Child

In a nutshell: In this study Nawal Ahmed Aboalola, from Umm Al-Qura University in Saudi Arabia, studied the effect of a mindfulness-based intervention on improving executive function and reducing the symptoms of ADHD in young children. 56 children aged between five and seven, all with ADHD or ADHD symptoms, took part in the study and were divided into a group who took part in the intervention and a control group. The children who took part in the intervention showed improved executive function, and a reduction in ADHD symptoms. Aboalola concluded that “this study demonstrates that it is possible to enhance EF [executive function] skills using [a] mindfulness-based intervention in which young [people] with ADHD are engaged in a series of group-play based activities.

You can read the abstract of this article at: <https://doi.org/10.1080/21622965.2023.2203321>

Trauma in the therapy centre

Source: Traumatology: an international journal

In a nutshell: While incidents of abuse and maltreatment of people with learning disabilities have – quite rightly – received considerable media coverage it’s easy to forget that it’s not always a picnic for staff working with this group of people. In this study Daniel A. Boamah, from Western Kentucky University, led a team of researchers investigating the predictors of secondary traumatic stress among this group of workers. The researchers found three main risk factors: exposure to client trauma; exposure to frequent challenging behaviour from clients; and workers’ own history of trauma. Personal resilience and organizational support were both protective factors whereas perceived supervisor support had no effect.

You can read the abstract of this article at: <https://doi.org/10.1037/trm0000414>

Neurodivergence and couples therapy

Source: Sexuality and Disability

In a nutshell: Being in a relationship as, or with, a neurodivergent person is not always easy yet with increasing numbers of people being diagnosed with neurodivergence more and more of us are likely to find ourselves in this situation. In this study Chrystal N. McDowell, from Florida State University, led a team of researchers analysing the content of couples’ therapy sessions where one of the clients was neurodivergent.

They found that neurodivergent partners were more likely to use “problem,” talk than “solution,” talk compared to neurotypical people.

You can read the abstract of this article at: <https://doi.org/10.1007/s11195-022-09765-9>

Neurodivergence and sex education

Source: Sexuality and Disability

In a nutshell: Getting into a relationship in the first place (see above) can be tricky enough for neurotypical people, with complex signals to be read it's important that neurodivergent people get high-quality sex education. In this study Erin Donnelly, from Family Planning New South Wales, led a team of researchers assessing the effectiveness of six sex education workshops. 145 people took part in the workshops, 34 of whom were interviewed later. The workshops were found to lead to significant improvements in self-reported knowledge and confidence which still pertained three months later. Barriers to the provision of sex education included: feelings of isolation and stigma; a preference for an “as and when,” approach to sex education; and a lack of accessible information and resources.

You can read the abstract of this article at: <https://doi.org/10.1007/s11195-023-09786-y>

Can you teach neurodivergent kids with i-Pads?

Source: Journal of Special Education Technology

In a nutshell: Young children are naturals with technology and in this study Adeline M.Y. Yeong, from the Psychological Studies Academic Group in Singapore, led a team of researchers investigating the use of i-Pads to teach daily living tasks to three teenagers with ASD and moderate intellectual disabilities. They found that all the teenagers learned to “independently operate the i-Pad and access instructional materials presented via e-Books. Furthermore, they applied these skills to learn and independently perform other novel daily living tasks.”

You can read the abstract of this article at: <https://doi.org/10.1177/01626434221102538>

Transporters – Thomas the Tank Engine with added extras

Source: Journal of Special Education Technology

In a nutshell: One of the many good works done by Stephen Fry is providing the voice-over for [*The Transporters*](#), a Thomas-the-Tank Engine-style film designed to teach children with autism about emotions. In this study Zhi Wang, from the Faculty of Education in Kuala Lumpur, led a team of researchers investigating the effects of *The Transporters* on emotion recognition in four children with ASD who had limited speech. The researchers found that it effectively improved emotion recognition in all the children, although the children weren't able to generalize this after seven and 15 days.

You can read the abstract of this article at: <https://doi.org/10.1177/01626434221095031>

CBPT + ADHD = 😊

Source: The British Journal of Clinical Psychology

In a nutshell: In this study Bernd G. Heubeck, from the Australian National University in Canberra, led a team of researchers assessing the effectiveness of cognitive-behavioural parent training (CBPT) for families with children with hyperkinetic disorder/ADHD. 237 children took part in the study which found all the children's behaviour problems improved over time. However, the children who received individual or group CBPT had significantly-greater improvement than those who simply received treatment as usual. There was a "somewhat greater," effect of individual CBPT than for group CBPT.

You can read the abstract of this article at: <https://doi.org/10.1111/bjc.12413>

ADHD – what's the collateral?

Source: Neuroscience and Biobehavioural Reviews

In a nutshell: "When troubles come," observed Macbeth "they come not single spies, but in battalions," that certainly seems to be the case for adults with ADHD, judging from this study, led by Catharina A. Hartman, from the University of Groningen in The Netherlands. The study analysed data from 15,097,562 people and found that adults with ADHD were five times as likely to suffer from anxiety; 4.5x more likely to suffer from depression; 8.7x more likely to be diagnosed with bipolar disorder; and 4.6x more likely to be diagnosed with a substance-use disorder. Women had higher prevalences of anxiety, depression, and bipolar disorder but this was consistent with higher levels of these conditions among women in the general population.

You can read the abstract of this article at: <https://doi.org/10.1016/j.neubiorev.2023.105209>

How do parents cope with an ASD diagnosis?

Source: Journal of Advanced Nursing

In a nutshell: Getting a diagnosis of ASD for your child can be a little like waiting for the coroner's report after the sinking of the Titanic; it allows you to get official help but hardly comes as much of a shock and comes late in the day after a long, drawn-out bureaucratic process. In this study Shaofei Liu, from Sun-Yat-Sen University in China, led a team of researchers investigating parents' coping strategies after their child had been diagnosed with ASD. 193 parents took part in the study which found that parents were more likely to use positive than negative coping strategies. "Parenting efficacy, subjective support and support utilization predicted positive coping strategies, and parenting satisfaction was a protective factor against negative coping strategies."

You can read the abstract of this article at: <https://doi.org/10.1111/jan.15708>

What do autistic people talk about on Twitter?

Source: Studies in Health Technology and Informatics

In a nutshell: In this study Elia Gabarron, from Østfold University College in Norway, led a team of researchers analysing tweets containing the hashtag #ActuallyAutistic, between February and September 2022. They found that tweets containing this tag fell into six “themes,” viz:

- General aspects of autism and experiences of autistic people
- Autism awareness, pride, and funding
- Interventions – mostly related to Applied Behaviour Analysis
- Reactions and expressions
- Everyday life as an autistic person
- Symbols and characteristics

“The majority of tweets were presenting general aspects and experiences as autistic individuals; raising awareness; and about their dissatisfaction with some interventions.”

You can read the abstract of this article at: <https://doi.org/10.3233/SHTI230161>

Neurodivergence in the office

Source: International Journal of Environmental Research and Public Health

In a nutshell: With other people’s telephone calls, Teams meetings and visitors I often fantasise about working in a shipping container, communicating with the outside world once a day via telegram. No doubt many neurodivergent people feel similarly and in this study Michal T. Tomczak, from Gdańsk University of Technology in Poland, led a team of researchers asking them about how technology could help. The participants in the study gave the highest ratings to solutions aimed at limiting over-stimulation and a flexible approach towards working time, the support of a job coach, remote working, and support by allowing electronic-mediated communication based on non-direct contact.

You can read the abstract of this article at: <https://doi.org/10.3390/ijerph20105773>

How can we help get people into work?

Source: Inclusion

In a nutshell: Starting a job after leaving college can be tricky for anyone. What do all those buttons on the photocopier do? How does Janet take her tea again? Why are all the forms you need to fill in non-editable PDFs? That kind of thing. It can be even trickier for autistic people and in this study Clare Papay, from the University of Massachusetts, led a team of researchers studying the effect of the Transition and Post-Secondary Programmes for Students with Intellectual Disability scheme used in 23 states in the US. The programme offers students with intellectual disabilities and/or autism the opportunity to “navigate adult learning experiences with similar-aged peers, accessing college coursework and employment experiences while continuing to receive support from, or coordinated by, their local school system.” The researchers’ findings “suggest that college-based transition programmes hold promise as a model for supporting the transition to paid employment for students with intellectual disabilities and/or autism.”

You can read the abstract of this article at: <https://doi.org/10.1352/2326-6988-11.2.118>

How can we help get people into work II

Source: Journal of Applied Research in Intellectual Disabilities

In a nutshell: Also studying young adults' transition to the world of work (see above) were a team of researchers, led by Elisa Vigna, from Cardiff University who evaluated the effectiveness of the Engage to Change project in Wales designed to support young people to achieve employment. The researchers studied 1,008 people, aged between 16 and 25. The researchers found an overall employment rate of 23% for the project. However, "young people who engaged in "significant work experience," such as paid placement or supported internship, had a greater employment rate of 37%"

You can read the abstract of this article at: <https://doi.org/10.1111/jar.13094>

When Mr Bean wears thin

Source: PLoS One

In a nutshell: Autistic people are known to have trouble with their motor coordination and in this study Emma Gowen, from Manchester University, led a team of researchers who interviewed 17 autistic adults about this issue. Four themes emerged from the researchers' interviews which were:

- Motor coordination difficulties were pervasive and variable, were life-long and affected several movements and many aspects of life. The nature of the difficulties varied within and between people, along with a differing awareness of coordination ability
- Motor coordination was seen as an active process, requiring concentration for most actions and at a level which seemed greater than for other people
- Motor coordination difficulties affected social and emotional wellbeing by placing strain on relationships, prompting bullying, and exclusion, putting safety at risk, and causing a range of negative emotions
- In the absence of any support people described several learning and coping strategies

You can read the abstract of this article at: <https://doi.org/10.1371/journal.pone.0286753>

Do people grow out of ADHD?

Source: European Child & Adolescent Psychiatry

In a nutshell: It can be difficult to distinguish ADHD from the normal fidgetiness and short attention spans typical of any child; the ones who are preternaturally still and focused being as much of a worry as those with ants in their pants. Whether children grow out of ADHD is a moot point; one this study, by a team of researchers led by Anna R. Van Meter, from New York University, attempted to tackle. The researchers tracked 685 children over eight years. 431 of them had childhood-onset ADHD. Half had a consistent course of ADHD, nearly 40% had a remitting course, and the remaining participants had a fluctuating course. More than half the participants still met the criteria for ADHD at the end of the study; 30% demonstrated stable full remission, 15% had unstable symptoms and one had stable partial remission. "Participants with a persistent course and stable ADHD outcomes reported the highest number of symptoms and were most impaired."

You can read the abstract of this article at: <https://doi.org/10.1007/s00787-023-02235-3>

... and what happens to the ones who don't

Source: Developmental Psychology

In a nutshell: In this longitudinal study Andrew E. Koepp, from the University of Texas, led a team of researchers studying 17,674 people in the US and UK. They concluded that persons who exhibited attention and behaviour problems in childhood had greater financial struggles, poorer health, and a greater likelihood of criminality once they reached adulthood.

You can read the abstract of this article at: <https://doi.org/10.1037/dev0001533>

ADHD and under-the-counter stimulants

Source: Social Psychiatry and Psychiatric Epidemiology

In a nutshell: In this study François A.M. Jean, from Dr Jean Eric Techer Hospital in Calais, led a team of researchers investigating "illicit stimulant use," in a sample of 4,270 French students. The researchers found that high levels of ADHD symptoms at the start of the study were associated with a greater probability of stimulant use over the next year (2.42 times greater). The risk was greater among participants with ADHD who had used illicit stimulants at least once before the start of the study (2.7 times greater) and was 2.25 times greater among students with ADHD who had never used stimulants before the start of the study.

You can read the abstract of this article at: <https://doi.org/10.1007/s00127-023-02499-9>