Fake News 20 March 2024 Transcript and Slide Descriptions

Slide 0 description: *An image of two white hands using a smart phone sits to the left of the slide against the lilac background. The smart phone screen displays a parody news site called "Fake News" which is filled with three fake headlines depicted by negative words: "Prejudice scaremongering stigma"; "Discrimination ableism stereotypes"; "exclusion misconceptions inequality". At the bottom of the screen text says "for more misinformation" above a red button labelled "subscribe". A finger hovers over the button. In the top right corner are No5 Barristers' Chambers logo, and neurodiversikey®'s logo. Below the logos text made to look like letters cut out from a newspaper says: "Fake News." Below this is the text "A neurodiversity myth-buster."*

Mark Bradshaw: Hey, good evening everyone! Welcome to this Fake News event and Happy Neurodiversity Celebration Week. My name is Mark Bradshaw and I'm a member of No5 Barristers' Chambers. I'm the Wellbeing Officer in Chambers and I'm delighted to have been invited by neurodiversikey® to chair this event today, one of many that I know that they are involved in this week. Do please take a look at their website for other events that you can attend this week, I know there are still a number still to go through the course of the rest of this celebration week. This event then, Fake News, is a neurodiversity myth-buster. We will hope to dispel some of the most common neurodiversity misconceptions today, and expose the truth about neurodivergence. I'm very much looking forward to learning myself about neurodiversity from our very knowledgeable speakers today.

But a little about neurodiversikey® first. Neurodiversikey® is a non-profit organisation which launched in October 2023 with the aim of making the legal actor and justice system neuroinclusive, mainly through education and training. The organisation was awarded the "Legal Sector Neurodiversity NPO of the Year" award in the SME News UK Legal Awards in 2024 and shortlisted in the Women and Diversity in Law Awards 2024. So, has achieved a lot in a very short period of time and I'm sure very much will still to come.

We will have three speakers this evening so I'm going to introduce those to you now. First of all, Emma Llanwarne who is a co-founder of neurodiversikey® and a consultant criminal defence paralegal who was called to the bar in 2022 having been awarded the Rosina Hare scholarship by Middle Temple. You'll also hear from Danielle Gleicher-Bates who is the co-founding Chair of neurodiversikey® and winner of the "DE&I Champion of the Year in a Specialist Role" award in the Women and Diversity in Law Awards 2024. Danielle is a double scholar on the Bar Vocational Studies course at City University. And last but not least, you'll hear from Charlotte clewes-Boyne who is also a co-founder of neurodiversikey®. Charlotte qualified as a solicitor in 2018 and after working in law firms for approximately 4.5 years she now works in-house as Senior Legal Counsel.

This event is staged in conjunction with No5 Barristers' Chambers so a little about us. We are delighted as I say to be involved in this event today, for those who don't know us we're a national set of chambers with over 260 barristers including 39 silks and we have offices in Birmingham, London, and Bristol. And as you can imagine from a set of our size we have expertise across all areas of law, and we also have a number of neurodiverse barristers among our members.

So, as far as the event today is concerned, we will start off with a brief overview of neurodiversity before moving on to dispel some of the most common misconceptions shared across neurotypes and we will then focus on some of the misconceptions about specific neurotypes, before finally looking at how those neurotypes diverge from the majority.

Quick word before we get to the material today, about surveys, neurodiversikey® is conducting two unprecedented surveys on neurodiversity and neuroinclusion across legal education, training and practice. The surveys are open to neurodivergent law students and legal professionals. Participation is anonymous and consists of 15-16 multiple choice questions. Surveys and more information can be found at neurodiversikey.com/surveys and we certainly would

urge as many of you as possible to fill in those surveys whilst they are open. For the event today, if there are any questions then I know that the speakers will be happy to take those and there should be time at the end to deal with those. So please post any questions into the chat function and we'll come to them at the end of the session. And as you'll have noticed the session today is being recorded. So without further ado I'll hand over to Emma who will be our first speaker.

Slide 1 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Neurodiversity: an overview" and subtitled "Terminology". Below the subtitle is the list "Neurodiversity; neurotype; neurotypical; neurodivergent; neurodiverse; neurominority; neuronormativity". To the right of the list is a graphic showing nine purple brains each containing three sizes of a shape unique to that brain.*

Emma Llanwarne: Thank you very much Mark. Welcome everybody. So firstly, let's get right down to the basics of neurodiversity, starting with the terminology that we use. The neurodiversity movement is fairly new, and emerged from the Autistic Rights Movement which began in the 90s. As with anything new, there isn't always total agreement on the exact definitions we use. So, we're going to go over them now and we're going to focus on some of the most common ones, and define them in the way that we, neurodiversikey use them. We use the definitions which are most widely agreed upon across the neurodivergent community, and any differences tend to be fairly minor anyway. We want to emphasise that language is often a personal choice and the most important thing is being respectful to one another.

Starting off we have neurodiversity which encompasses all of the different forms of the neurocognitive functioning across humanity. This includes both neurotypical and neurodivergent. As I mentioned earlier, there is also the neurodiversity movement, which advocates for a move away from a deficit focused view of neurodivergence towards acknowledging and supporting both the strengths and challenges.

Onto neurotype - this is the term for a particular form of neurocognitive functioning or 'brain wiring'. For example neurotypical, or dysgraphic.

Neurotypical refers to neurocognitive function within a range society deems 'typical'. Neurotypical may refer to a person, or a group made up of just neurotypical people.

Neurodivergent refers to neurocognitive functioning that falls outside the range society deems 'typical'. As with neurotypical, neurodivergent can refer to a person, or a group made up of neurodivergent people alone.

Onto neurodiverse - this describes a group which is made up of more than one neurotype for example it's a mix of both neurotypical and neurodivergent neurotypes, or it can be a mix of neurodivergent neurotypes.

Neurominority describes a group who are a minority in terms of their neurotype, for which they face discrimination and oppression.

Lastly, neuronormativity - this is the framing of what society deems acceptable in terms of neurocognitive functioning as the sole and superior way of being.

Slide 2 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Neurodiversity: an overview" and subtitled "Neurodivergent neurotypes". Below the subtitle is the text "We will focus on: ADHD, Autism, Dyscalculia, Dysgraphia, Dyslexia, Dyspraxia/DCD. Executive function: a common area of divergence".*

Emma Llanwarne: Now moving on to the neurodivergent neurotypes, we will focus on ADHD, autism, dyscalculia, dysgraphia, dyslexia, and dyspraxia/DCD. So they are all neurominorities. We're going to focus on the most commonly touched on as I've just said, but also have many commonalities between them as well as high rates of co-occurrence with one another.

One common area of divergence across the neurodivergent neurotypes is executive functioning, which is like the built in personal assistant in your brain which deals with things like organisation, time management, and emotional regulation.

You probably know ADHD as being associated with differences in attention, activity and impulsivity.

Meanwhile your understanding of autism probably includes differences in social communication, social interaction, and processing information including sensory information.

The next 4 all come under the umbrella of Specific Learning Differences:

Dyscalculia which is less well known, but typically understood as differences in processing numerical information

Probably the least known is dysgraphia, which is characterised by differences in written expression.

And you've probably all heard of dyslexia, but not necessarily in terms of differences in processing information and language.

Finally, dyspraxia, otherwise known as DCD. Previously known as clumsy child syndrome, it won't surprise you that dyspraxia is commonly known for differences in coordination and movement.

We'll now move on to some busting of some of the common myths applicable across these neurotypes, followed by myths specific to individual neurotypes. We'll be showing you genuine headlines and titles we've found, which are quite hard hitting.

Slide 3 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Unintelligent, less capable". Below the subtitle is the text ""Many educators hold negative attitudes towards individuals with [Specific Learning Differences], believing*

that these individuals are less intelligent, more difficult to teach or lazy." (Lisle & Wade, 2014, emphasis added)". Below the text are screenshots of headlines including: "Dyslexia 'is just a middle-class way to hide stupidity'" (Daily Mail); "Police boss banned officer from firearms training because of her dyslexia and autism" (Lancs Live); "How can a smart kid be bad at math?" (Discover Magazine); "'People thought I was stupid, lazy or stoned but I actually had ADHD'" (My London); "Autistic drivers could find their licences in legal limbo depending on where they live after new standards introduced" (Australian Broadcasting Corporation).

Emma Llanwarne: So we're starting off with one of the most stigmatising and damaging myths: neurodivergent people are unintelligent and less capable.

As you can see from the headlines, neurodivergence is frequently portrayed as being less intelligent or less capable. In fact, it actually goes much further than reduced intelligence or ability, we are called stupid, lazy, and bad. Neurodivergence is seen as mutually exclusive of intelligence or ability. And depressingly, the research shows that teachers see neurodivergent, specifically dyscalculic, dysgraphic, dyslexic or dyspraxic, students, as less intelligent, more difficult to teach, or lazy.

So, not only is the unintelligent, less capable myth inaccurate, but it follows neurodivergent people throughout and in all areas of their lives.

Onto the truth: well, in order to be diagnosed with a Specific Learning Difference per the DSM-5, intellectual disability must be ruled out as a better explanation for a person's divergence.

On the subject of diagnosis, high intelligence can result in better compensatory mechanisms and masking, which can lead to missed or delayed diagnosis.

Autism is often misunderstood as an intellectual aka learning disability. And whilst a third of autistic people are intellectually

disabled this is correlative not causative. In fact, recent research suggests an association with "high but imbalanced intelligence".

As for ADHD, it has been shown that lower IQ does not cause ADHD differences. Additionally, High Intellectual Ability can be mistaken for and is not mutually exclusive of ADHD. People who are ADHD or the other neurotypes, and are considered to have High Intellectual Ability are referred to as twice exceptional.

Aside from the point about the diagnostic criteria of the DSM-5, It has long been established that dyscalculic, dysgraphic, dyslexic, and dyspraxic people are typically of normal intelligence.

Slide 4 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Illegitimate (fake, over-diagnosed, a fad, an excuse)". Below the subtitle is a collection of screenshots of headlines which say "Dyslexia: a big, expensive myth" (The Telegraph); "NHS 'can't cope' with surge in Brits self-diagnosing ADHD and autism, expert warns" (Daily Mail Online); "I'm sorry but all this ADHD doesn't add up. Celebrities have helped convince us that we all need an 'illness identity'" (Dominic Lawson in The Sunday Times); "Does dyslexia exist - or is it just an excuse?" (Worcester News); "'Rise of autism makes diagnosis meaningless'" (The Times); "PETER HITCHENS: It has a huge and powerful lobby which turns with fury on its critics so I know this question will get me into loads of trouble but... does ADHD even exist?" (The Daily Mail); "HITCHENS: Dyslexia is not a disease, it is an excuse for bad teachers" (Daily Mail); "Doctor: ADHD does not exist" (Time Magazine); "Has TikTok convinced us all we've got ADHD? Doctors think so" (Cosmopolitan). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Emma Llanwarne: Frustratingly, neurodivergence is commonly referred to as illegitimate in one way or another, for example as being fake, over-diagnosed, an excuse, or just a fad.

This myth really invalidates the difficulties and barriers

neurodivergent people face, and only encourages the refusal of accommodations and support. Despite extensive evidence of not only the individual neurotypes in isolation, but their significant co-occurrence, we still hear that's all in our head.

We're either using our imaginary neurotype as an excuse, trying to be trendy, being blamed for the downfall of the NHS, or part of some global commercial conspiracy. But in reality, there are serious implications to the refusal to recognise and adequately support neurodivergence.

If neurodivergence isn't real, how is it that there is high heritability and co-occurence between neurotypes?

It's not self-diagnosis that's breaking the NHS or driving rising diagnoses. That's a result of many different things. Firstly, over the years diagnostic criteria have widened, making more people eligible for diagnosis. That includes, for many of the neurotypes, not even recognising adult diagnoses. So many of the people who were missed as children when diagnostic criteria were narrower, are now being identified after years of struggling. On top of this, there is a greater awareness and acceptance, meaning people are less likely to actually avoid diagnosis. In actual fact, there is evidence that neurodivergence is actually underdiagnosed across neurotypes.

Slide 5 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "A 'golden ticket' (to obtain unfair advantages/benefits)". Below the subtitle is a collection of screenshots of headlines which say "Extra exam time more likely for private pupils, new figures reveal. Experts believe wealthier parents may be paying for private assessments and gaining an possibly unfair advantage." (Daily Express); "My special needs child was given a head-start in her school's Sports Day race - now other parents are complaining she had an 'unfair advantage'" (Daily Mail); "Faking ADHD gets you into Harvard" (The Daily Beast); "Unscrupulous parents seek ADHD diagnosis for benefits. Head teachers claim some parents are lying to doctors in order to have*

their children diagnosed with ADHD to falsely claim disability..." (BBC); "Warwick Uni denied a dyslexic student extra time as it... In a meeting, the student was told the extra time would give them an 'unfair advantage' as assessments are not the same as exams." (The Tab). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.

Emma Llanwarne: The Golden Ticket myth, now despite being completely misguided, is very very popular. This myth portrays neurodivergence as a means of obtaining unfair advantages or benefits. This doesn't just relate to financial gain, although snippets about disability benefits for example are pervasive. This is also a common myth in relation to the provision of reasonable adjustments. It's not surprising that many neurodivergent people avoid disclosing their neurotype and requesting reasonable adjustments.

So, it's clear from what we have covered so far that in one way or another, neurodivergent people are considered inferior, face significant stigma, and difficulties accessing diagnosis and support. Yet, at the same time, we're apparently just trying to get a head start on everyone else. The stigma is so strong that, as you can see from the top right headline, adults are even targeting children, in this case a dyspraxic child.

Slide 6 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Tragic (sufferance, a burden, negative)". Below the subtitle is a collection of screenshots of headlines which say "She's a brilliant Cambridge graduate. So why does Annabel blame herself for giving her son DYSLEXIA?" (Daily Mail); "The war of words over dyslexia: now it's a blessing, not a curse" (The Telegrapht); "UK press attitudes towards autism skew negative, new... More than 90% of the time, newspapers present autistic people as lacking agency or missing a voice..." (Edge Hill University); "'Having a baby scares me more now': The Bachelor's Alex Nation posts throwback picture as pregnant teen while reflecting on being a mother to son Elijah... after he is diagnosed*

with dyslexia, dysgraphia and dyscalculia." (Daily Mail); "Attention-deficit/hyperactivity disorder is a burden enough, without misunderstanding and judgement, ADHD experts say" (Australian Broadcasting Corporation); "TV Presenter Rav Wilding reveals life-long battle with Dyspraxia diagnosis. Former Crimewatch host Rav Wilding has opened up about the motor-skills disorder that has hampered him his whole life," (Irish Mirror); "Study is breakthrough for dyscalculia sufferers. Scientists think they have found the area of the brain that goes wrong in people with dyscalculia - a condition that renders them unable to..." (Laboratory News); "No need to feel blue if your child has visual dyslexia. Dyslexia is a real drag, not just for the children who endure it, but for parents who are at their wits' end trying to work out how to stop their offspring from falling behind at school" (BBC). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.

Emma Llanwarne: According to the prevalent culture, neurodivergence is a tragedy, even sufferance or a burden. And the tragedy, sufferance and burden is not depicted as being uniquely experienced by the neurodivergent person, but also their loved ones. There is a particularly extensive narrative in the US, where a particular organisation has run some horrific campaigns including those comparing autism to cancer and to AIDS.

As you can see from these headlines, neurodivergence is depleted as shameful, life-limiting, and terrible. This myth is so deeply ingrained that we have mothers racked with guilt and fear over blighting their offspring with the horrors of neurodivergence.

These perspectives leave no room to acknowledge the strengths of neurodivergent individuals, and can even lead to invalidation of neurodivergent individuals who "don't appear to fit the stereotype". This myth plays into the next, which in turn allows eugenicist views to fester.

Slide 7 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "A problem to solve, cure, prevent,*

eradicate". Below the subtitle is a collection of screenshots of headlines which say "Autism: is it in the water? ... Few conditions have stymied explanation like autism spectrum disorder (ASD)" (Medscape); "FDA considers ban on electric shock conditioning for autistic patients" (The Guardian); "Brain stimulation technology shows promise for treating childhood ADHD" (UPI.com); "Autism and ADHD: is BPA a contributing factor?" (Medical News Today); "Electric current to the brain 'boosts maths ability'" (BBC); "Parents are poisoning their children with bleach to 'cure' autism. These moms are trying to stop it." (NBC News); "New hope of dyslexia cure after controversial electric current therapy study" (The Mirror); "Is CDC overconfident in proclaiming no autism risk from vaccines? | Opinion" (Wichita Eagle); "How parents can help prevent the development of ADHD symptoms |Waterloo News" (University of Waterloo); "Netherlands euthanizing autistic and intellectually [disabled] people, researcher finds. Dutch assisted suicide programs have authorized an increasing amount of autistic and mentally [disabled] youths, a British study found." (Fox News). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.

Emma Llanwarne: The idea that neurodivergence is a problem to solve, cure, prevent or eradicate is far from new. Autism is the most well known target for seeking a cure, and finding a cause. What probably comes to mind first is the now debunked myth that autism is caused by the MMR vaccine. As you can see we've now moved on to BPA, contaminated water, and other vaccines. However it started much earlier than this, in the World War Two period.

Society is so concerned with changing or eradicating neurodivergence that it's resorting to methods that you would expect to hear of in the 50s. From electric currents to the brain, to bleach. Most horrifyingly though, there have been cases in the Netherlands where assisted suicide has been approved either solely or mainly on the basis of autism.

Slide 8 description: *The neurodiversikey® logo sits in the top right*

corner against the lilac background. The slide is titled "Myth-busting" and subtitled "A childhood phenomenon, infantile". Below the subtitle is a collection of screenshots of headlines which say "Is your child's math anxiety really dyscalculia?" (The Healthy @Reader's Digest); "Why is my child so clumsy? Explaining dyspraxia" (ADDitude); as well as text saying "Limited resources/services/advice for adults"; "ADHD commonly perceived as immaturity (Mausch et al 2019)"; "Whilst representation of autistic adults has increased, mainly still see children. And adults represented may be infantilised in other ways e.g. referring to their parents (Akhtar et al 2022)"; "Using a puzzle piece to represent autism". At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.

Danielle Gleicher-Bates: As mentioned before, from a diagnostic perspective, these neurotypes used to be mostly associated with children rather than across the lifespan. Society's understanding has changed very little and this myth still exists. Not only is neurodivergence misunderstood as a childhood phenomenon, but neurodivergent people are seen as childlike and infantilised.

This myth is perpetuated by the media and depictions of neurodivergent people as either children, or childish. This is not helped at all by the fact that there are limited resources, services, and advice available for adults and that most of the freely available information out there references or relates to children. Additionally, there is still less research on neurodivergence in adulthood compared to childhood. This is especially true for example for dyscalculia.

The puzzle piece, which is often coloured in childish bright colours, tends to be used to symbolise autism, insinuating that autistic people are either children or childlike adults. Research even shows that people often perceive ADHDers as immature.

This myth persists despite research demonstrating that neurodivergence exists across the lifespan, and even that neurodivergence may be missed as a child and be outwardly

expressed differently as an adult thanks to acquired compensatory mechanisms, for example in dyslexia and dyspraxia. The impacts of neurodivergence may even worsen throughout life as it does with dyslexia.

Slide 9 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Superpowers". Below the subtitle is a collection of screenshots of headlines which say "the good things about ADHD: 'It's my superpower'" (BBC); "Why neurodiversity is a superpower in the workplace" (RTE.ie); "Why dyslexia is touted as a superpower" (The Star); "Dyspraxia, My Hidden Superpower (Short 2020) - News" (IMDb); "Autism i an ability not a disability... it is a superpower" (ITVX); "Super powers of dyscalculia" (Dyscalculia Headlines). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Danielle Gleicher-Bates: Before we begin with this one, I want to take a moment to explain that we fully support celebrating neurodivergent ability, strength, and achievement. And we respect individuals' choices as to whether they personally identify with the superpower narrative. However, it is a contentious narrative, and we have to address how this narrative as a generalisation can be harmful and inaccurate.

In more recent years, neurodivergence has begun to be associated with the idea of superpowers which is usually well-intentioned, even if unhelpful. Of course, there are people who do find this empowering to identify with superpowers.

The superpower narrative is considered problematic by many for a number of reasons. To begin, superpowers, by their very nature, insinuate abilities which are outside of human capability.

Assuming we interpret the superpower narrative in this way, we're setting unrealistic expectations, minimising the very real, serious challenges and barriers faced by neurodivergent people, and even setting ourselves up for failure. We also risk alienating the

individuals who do not identify with having superpowers and consequently may not only feel they're failing at neurotypicality, but also neurodivergence.

The narrative fuels dehumanisation, considering you cannot be human and have abilities beyond human capability. It can also drive infantilisation, which is unsurprising given the association of superheroes with childrens' dressing up boxes and playtimes.

But finally, even if taken less literally, it's still not accurate. As with the neurotypical population, only a very small percentage of neurodivergent people have a high IQ, special skills, or in the case of autism savant abilities.

Slide 10 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Trivial". Below the subtitle is a collection of screenshots of headlines which say ""You're just kooky" why women with autism aren't taken... "You're just a shy girl" was one of many things Dr Sarah Bargiela heard from autistic women who weren't diagnosed until later in life." (Refinery29); "Neurologist Dr Richard Saul claims ADHD is masking less serious problems" (Daily Mail); "Dyspraxia can be serious - it deserves more recognition" (The Guardian); "ADHD or immaturity | signs of ADHD | ADHD Misdiagnosis" (Child Mind Institute); "Dyslexia, why does nobody take it seriously?" (Childline); "Is dyscalculia as serious as dyslexia? Professors Brian Butterworth and Marcus Du Sautoy debate whether dyscalculia is a serious disorder." (BBC). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Danielle Gleicher-Bates: Despite the lifelong struggles many neurodivergent people face, the myth that neurodivergence is trivial or not serious enough prevails. This could'nt be further from the truth.

The Specific Learning Difficulties tend to be seen purely as academic, school difficulties, whereas ADHDers and autistic people with low support needs may be dismissed as just being quirky,

fussy, rude, or difficult.

Unrecognised and unsupported neurodivergence can have devastating impacts. The school to prison pipeline refers to the increased risk of incarceration as a result of school exclusion among young neurodivergent people. This results from unidentified, ignored and undersupported neurodivergent needs at school and within the youth justice system.

Neurodivergent people are at a higher risk of negative emotional, social, educational, and economic outcomes.

Up to 80% of ADHDers have at least one mental health condition, and according to research in Denmark, they face decreased life expectancy and twice the risk of death. Not to forget the negative social and employment impacts.

Autistic mental health is impacted negatively too, with unmet needs linked to suicidality and the risk of suicide being 9 times higher in non-learning disabled autistics than the general population. Health inequality reduces autistic people's lives, who also face an employment and wage gap.

Back to the specific learning differences, generally they increase the risk of emotional distress in particular, and there is a 46% increased risk of attempting suicide.

Dyscalculia is associated with negative emotional, academic, and employment impacts, and when unsupported, often results in school absence and failure.

60% of dyslexics have at least one mental health condition, and are more likely to experience the negative emotional, social, educational, and employment outcomes, including a wage gap.

Dyspraxia can take an emotional and economic toll, and frequently co-occurs with other neurotypes as well as mental health conditions.

Slide 11 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Bad behaviour, lack of discipline". Below the subtitle is a collection of screenshots of headlines which say "ADHD will remain misunderstood until TV shows us characters who aren't 'naughty' stereotypes" (inews.co.uk); "No such thing as naughty anymore? When is bad behaviour simple naughtiness rather than a medical condition like ADHD?" (BBC); "Tory deputy chairman Lee Anderson says benefit system is 'too nice' and ADHD is 'bad parenting'" (inews.co.uk); "Scientists discover badly behaved dogs might just be suffering from ADHD..." (The Sun). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Danielle Gleicher-Bates: Now that we've covered some of the common myths across the board, we're going to dig down into the myths associated with individual neurotypes, starting with ADHD, which many people wrongly assume is actually just bad behaviour or a lack of discipline.

Obviously the headlines here show the myth's prevalence in the media, but it has also been identified as a common belief in research. Describing ADHD as naughtiness not only invalidates and minimises the serious impacts, but it places the blame on the ADHDer rather than a neuroexclusive, unsupportive environment, and encourages the child stereotype.

Far from bad behaviour or a lack of discipline, evidence actually suggests that some of the external signs of ADHD misconstrued as such, can actually be a result of differences in executive function, including the processes required for self-control, regulation, working memory, prioritisation and planning. These differences may manifest as for example interrupting others, blurting things out, difficulty focusing, and following instructions.

Slide 12 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Caused by sugar/diet". Below the subtitle is the text "In a USA study, participants "believed that they*

had good knowledge about ADHD, but their answers reflected the presence of misconceptions, for example sugar etiology..." (Moldavsky et al 2013 emphasis added)". Below the text is a collection of screenshots of headlines which say "Sugar-sweetened beverages pose a potential risk of ADHD" (News-Medical); "ADHD: it's the food, stupid" (grist.org). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.

Danielle Gleicher-Bates: Research participants in a US study held a number of false beliefs about ADHD including for example the belief that ADHD is caused by sugar consumption. The myth of sugar or diet otherwise causing ADHD has recently reared its head again after inaccurate reporting of a study on energy drinks.

As we know from busting the previous myths, there are a number of factors that cause ADHD, for example its high heritability indicating genetic components, as well as differences in executive function and brain structure.

Slide 13 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Drug-seeking, over-prescribed". Below the subtitle is the text "In the same study, "respondents also thought that medication was over-prescribed." (Moldavsky et al 2013)". Underneath the text is a collection of screenshots of headlines which say "Wealthier adults drive sharp rise in demand for ADHD drugs" (Financial Times); "Prescriptions for ADHD drugs jumped for young adults, women during pandemic" (ABC News); "Seven-fold increase in adult ADHD prescriptions over 10 years" (BBC); "ADHD drugs shortage fuels online black market" (BBC). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Danielle Gleicher-Bates: The media has played a huge part in labelling ADHDers as drug-seeking as well as perpetuating the myth of the over-prescribing of stimulant medication. This is further stigmatised when, in the context of healthcare and prescribing, instead of referring to the regulations - the Misuse of Drugs

Regulations, the reference is to the criminal law i.e. the Misuse of Drugs Act and research has highlighted the existence of the mistaken beliefs about overdiagnosis and treatment.

Not only is ADHD estimated to be underdiagnosed, but stimulant medication in particular has been proven to reduce the risk of mortality, suicidality, criminality, and substance abuse. Additionally, the earlier a person receives treatment, the better their prospects are across the lifespan.

Slide 14 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Lacking empathy, unfeeling". Below the subtitle is a collection of screenshots of headlines which say "Is autism really an 'empathy disorder?'" (Psychology Today); a Tweet by Allison Pearson saying "Lockdown was the brainchild of a bunch of men on the spectrum. They lacked the emotional intelligence to feel or anticipate the appalling consequences of criminalising human contact..." (@AllisonPearson); "Can I have empathy if I am autistic?" (Psychology Today); "Minassian's father tells van attack trial he's never seen his autistic son cry and shows no empathy" (National Post); "Do people with autism have 'normal' empathy & emotions?" (Elemy). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Danielle Gleicher-Bates: This is probably the number one myth about autism, and that is that all autistic people lack empathy and are unfeeling, even robotic.

Not only is this manifestly untrue, but it is dehumanising, and no doubt contributes to the poor treatment experienced by many autistic people. It also feeds the myth that autistic people are inherently dangerous, which you'll often see reinforced by the media reporting when autistic people are accused of for example violent or sexual crimes.

The myth of autistic people lacking empathy has actually been dispelled by what's known as the Double Empathy Problem. Rather

than this perceived lack of empathy being located within the autistic person, it turns out that the problem is actually a two way breakdown in communication between autistic and neurotypical people. The breakdown is therefore not the fault of the autistic person as has previously been suggested, but a communication mismatch on both ends. Similarly, mind blindness, which is not being able to guess what the other person is thinking, has been demonstrated to be two way between autistic and neurotypical people.

Slide 15 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting" and subtitled "Over-dramatic, fussy, difficult". Below the subtitle is a collection of screenshots of headlines which say "The spoiled brat stereotype and autistic children" (Autistic Science Person); "Autism and fussy eating" (Autism Center for Kids); "Is there a link between autism and stubbornness?" (Autism Parenting Magazine); and the cover of Sara Gibbs' book "Drama Queen. One autistic woman and a life of unhelpful labels. A memoir.". At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Danielle Gleicher-Bates: The dramatic, fussy, and difficult trope is often used to invalidate autistic people's sensory processing differences, and to negate the need to act and accommodate those needs. Autistic people are frequently criticised for their sensory sensitivity whether that's high or low, as well as difficulties with for example change. Commonly looked down on, heightened sensory sensitivity may mean that an autistic person has specific needs surrounding for example food, drink, clothing, and the physical environment around them.

What other people label as fussiness, or being difficult can actually be painful and distressing, as a result of differences in processing sensory information. Stubbornness is another label slapped on autistic people when faced with change. However, executive function differences, specifically differences in cognitive flexibility, mean that adapting to change can be much harder for autistic people.

Slide 16 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting Dyscalculia" and subtitled "Maths anxiety". Below the subtitle is a collection of screenshots of headlines which say "Is dyscalculia and mathematical anxiety the same?" (specialeducationcourses.college); "Is your child's math anxiety really dyscalculia?" (The Healthy @Reader's Digest); "Math anxiety: the bear in the classroom" (Dyscalculia Network). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Danielle Gleicher-Bates: You may have heard of dyscalculia being referred to as 'maths anxiety'. To muddle things further, the two do co-occur. But it's unhelpful to conceptualise dyscalculia as maths anxiety, because it ignores not only the inherent numerical processing differences of dyscalculia, but also the differences that aren't specific to maths.

Confusingly, maths anxiety can actually hamper maths performance. This is especially so amongst adults who have been avoiding all mathematical processing due to the maths anxiety. However, the two are actually very different and approximately 77% of children with maths anxiety demonstrate average to high maths performance.

Slide 17 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting Dyscalculia" and subtitled "Only impacts maths". Below the subtitle is a collection of screenshots of headlines which say "Dyscalculia: 'maths dyslexia' or why so many children..." (The Conversation); "All you need to know about 'math dyslexia'" (The Swaddle); "Not just 'bad at maths' - an introduction to dyscalculia" (Teacher Magazine); "Maths strugglers 'may have dyscalculia'.." (BBC). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Charlotte Clewes-Boyne: Continuing with this dyscalculia for now. The further myth about Dyscalculia is that it only impacts maths it's often wrongly described as maths dyslexia, or just impacting mathematical performance.

Although dyscalculia and dyslexia do co-occur, they are distinct as you might have gathered already from what we've already discussed. And assuming dyscalculia only impacts maths ignores the difficulties individuals often experience in other areas, for example in relation to time and measure estimation. This assumption also has the potential to limit access to resources and support for challenges outside of mathematical performance as well.

Slide 18 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting Dysgraphia" and subtitled "Only impacts handwriting". Below the subtitle is a collection of screenshots of headlines which say "Understanding dysgraphia: handwriting in the digital age" (Thriveworks); "Messy handwriting? A quick guide to fix sloppy written work ... messy handwriting. Some diagnoses that go hand-in-hand with sloppy penmanship may include: dysgraphia; learning disability; developmental coordination..." (The OT Toolbox); "Poor handwriting or dysgraphia? - Metrokids" (metrokids.com). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Charlotte Clewes-Boyne: So next we'll move on to dysgraphia. Dysgraphia is the least talked about and researched neurotype, and therefore has the least myths. The main myth though surrounding dysgraphia is that only handwriting is impacted. This in turn can lead on to more generalised infantilisation or assumptions about their intelligence.

Dysgraphia can affect coordination and movement required for uniform handwriting, but it is actually associated with differences in written expression as well so for example getting your thoughts down on paper. Like dyslexia, spelling can be affected, but for different reasons. And dysgraphic people typically experience differences in phonological, auditory, and visual magnocellular processing.

Slide 19 description: *The neurodiversikey® logo sits in the top right*

corner against the lilac background. The slide is titled "Myth-busting Dyslexia" and subtitled "A visual phenomenon e.g. letter reversal, mirror writing". Below the subtitle is a collection of screenshots of headlines which say "My child is writing backward: do they have dyslexia?" (FamilyEducation); "Dyslexia: letter reversals" (Minnesota Neuropsychology); "Dyslexia letter & number reversals" (Blast Off to Learning); "Do people with dyslexia read and write backwards?" (BrainFacts). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.

Charlotte Clewes-Boyne: Moving onto dyslexia. One of the most common myths about dyslexia is that dyslexic people reverse letters when reading and writing or that dyslexia is a visual problem.

However, this isn't true. Not all dyslexics reverse letters or experience visual disturbances, because they are in fact caused by differences in visual processing for example, visual stress, and binocular vision differences.

Slide 20 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting Dyslexia" and subtitled "Only impacts reading/writing". Below the subtitle is a collection of screenshots of headlines which say "What is dyslexia? ...difficulty in reading..." (Yale Dyslexia); "Dyslexia: what it is, causes, symptoms, treatement & types. ... makes reading and language-related tasks harder..." (Cleveland Clinic); "What is dyslexia? Dyslexia is a learning disability in reading..."* (Understood.org). *USA source reflected by the use of 'learning disability' to mean what we refer to as 'Specific Learning Difference' in the UK, not intellectual disability. At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Charlotte Clewes-Boyne: Probably the most common though dyslexia specific myth is the one that only reading and writing are impacted.

Whilst reading and writing are the most affected areas, in reality, it

is rare that the impacts are restricted to just those things. Dyslexic people may also experience differences in closely related areas for example in relation to memory and spatial awareness.

Slide 21 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Myth-busting Dyspraxia" and subtitled "Just 'clumsiness'". Below the subtitle is a collection of screenshots of headlines which say "Clumsy and awkward? Dyspraxia may explain it. By Jae L" (Medium); "Dyspraxia: clumsy but clever" (The Telegraph); "Dyspraxia in Children: How to help clumsy kids" (Sunny Days Sunshine Center); "Why is my child so clumsy? Explaining dyspraxia" (ADDitude). At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Charlotte Clewes-Boyne: It's no real shock that, dyspraxia, which was once called "clumsy child syndrome" is frequently misunderstood as simple clumsiness.

Impacting coordination and movement, dyspraxia can manifest as differences in both fine and gross motor movement and coordination, but can also include differences in speech, vision, spatial awareness, and sensory processing. Additionally, it is common for dyspraxic people to experience differences in memory and concentration as well.

Slide 22 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "ADHD" and subtitled "Common areas of divergence, strength, challenge". Below the subtitle is a graphic of three cards made to look like they are from a card game. The top card's text is visible and says: "Divergence: concentration; attention; impulsivity; activity (physical and mental); motivation; working memory". At the end of the slide a red rubber stamp saying "BUSTED" covers the screen.*

Charlotte Clewes-Boyne: So now we're going to move on to talk a little bit about the individual neurotypes and explain a bit more about them. We've touched on individual neurotypes to an extent

already, but we're going to take a deeper into each one in terms of their areas of divergence, strength and challenge. The cards we're using are on the resources page of our website if you'd like to see the full deck. These are by no means exhaustive and of course every person is individual as well. And this is even more so when they are multiply neurodivergent so for example autism and ADHD which we refer to as AuDHD.

Starting off with ADHD's common areas of divergence, we have concentration, attention, impulsivity, physical and mental activity, motivation, and working memory. These differences manifest as a mix of common strengths and challenges.

For example, an ADHDer may exhibit strength in creativity, hyperfocus, spontaneity, enthusiasm, interpersonal skills, innovation, and being fast acting.

But on the other hand, the following may be more of a risk or a challenge for ADHDers so in relation to their: short term memory, organisation and time-keeping, managing risk-taking, distractibility, directing their attention, maintaining their concentration, impulse control, and emotional regulation.

ADHDers are colloquially referred to as having interest-based nervous systems. This means that they may find it much harder to manage those challenges if the task is something that does'nt ignite their passion. On the flip side, engaging in a personal passion can not only make the challenges easier to manage but also really take advantage of the strengths.

Slide 23 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Autism" and subtitled "Common areas of divergence, strength, challenge". Below the subtitle is a graphic of three cards made to look like they are from a card game. The top card's text is visible and says: "Divergence: Social communication; social interaction; sequencing; sensory processing; auditory processing; working memory; interoception; cognitive flexibility."*

Charlotte Clewes-Boyne: An autistic person typically diverges in areas of social communication and interaction, sequencing, sensory and auditory processing, working memory, interoception, and cognitive flexibility. Before we look at the areas of strength, I'll explain a few of those areas. Sequencing is effectively putting things, thoughts, or concepts in order. Interoception is your perception of internal senses for example, whether or not you're hunger, whether or not you need the toilet, whether you need a drink, your temperature, your heart rate, and your breathing. Cognitive flexibility refers to mentally adapting to changes.

If you're autistic, you might find your strengths lie in: problem solving; lateral and logical thinking; direct, clear communication; niche in-depth knowledge; a strong sense of justice; hyperfocus; or attention to detail.

Interestingly, attention to detail is associated with how autistic brains process information. An autistic person filters out less and processes more information. Conversely, this can be a huge challenge and lead to overwhelm and meltdowns.

Other challenges for autistic people include: change and unpredictability; allistic social norms and cues; sensory over or under sensitivity; emotional and physical regulation; putting things and ideas in order; organisation and time-keeping. And being allistic refers to anyone who is not autistic, whether they are neurodivergent or neurotypical.

Slide 24 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Dyscalculia" and subtitled "Common areas of divergence, strength, challenge". Below the subtitle is a graphic of three cards made to look like they are from a card game. The top card's text is visible and says: "Divergence: Numerical processing; sequencing; working memory; attention; visuo-spatial processing; long term memory."*

Charlotte Clewes-Boyne: Moving on now to dyscalculia. The dyscalculic brain's divergence lies in numerical processing; so again

this can relate to sequencing; working memory; attention; visuo-spatial processing; and long term memory. These are wide-ranging areas of divergence which really demonstrate that dyscalculia is not just about maths.

Some of the strengths linked to dyscalculia include: creativity and artistry; verbal communication; language; problem solving; strategic thinking; and intuition. Dyscalculic people can be brilliant communicators, both orally and in writing.

In contrast, mental arithmetic; organisation and time-keeping; reading clocks; estimation and measurements; memorising numbers; interpreting graphs; and processing numerical information are common dyscalculic areas of challenge.

Slide 25 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Dysgraphia" and subtitled "Common areas of divergence, strength, challenge". Below the subtitle is a graphic of three cards made to look like they are from a card game. The top card's text is visible and says: "Divergence: Written communication; working memory; fine motor skills; visuo-spatial processing; transcription; auditory processing; sequencing."*

Charlotte Clewes-Boyne: Dysgraphic divergence most commonly falls under: written communication; working memory; fine motor skills; visuo-spatial processing; transcription; auditory processing; and sequencing. It's now easy to see the link between dysgraphia and the associated differences in handwriting and written expression.

The strengths of a dysgraphic person may include: problem solving; interpersonal skills; listening; auditory memory; oral communication; and memory or recall of details.

Typical areas of challenge are: spelling and grammar; handwriting; writing down their thoughts; organisation and time-keeping; putting things and ideas in order; and processing written words.

Using a computer can help with written expression and of course that does negate the risks and the challenges associated with their handwriting.

Slide 26 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Dyslexia" and subtitled "Common areas of divergence, strength, challenge". Below the subtitle is a graphic of three cards made to look like they are from a card game. The top card's text is visible and says: "Divergence: working memory; sequencing; phonological processing; verbal memory; visuo-spatial processing"*

Charlotte Clewes-Boyne: A dyslexic person's areas of divergence could be: working memory; sequencing; phonological processing; verbal memory; and visuo-spatial memory.

The term dyslexic thinking has become a recognised noun, in recognition of the often strong problem solving abilities of dyslexic people. Other dyslexic strengths include: pattern recognition; analysis; visual and spatial reasoning; innovation; big picture thinking; visual thinking (and that includes in 3D); and long term memory.

The most common challenges of dyslexia are: reading; remembering words; putting things and ideas in order; organisation and time-keeping; written communication; spelling; grammar; and short term memory.

Slide 27 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Dyspraxia" and subtitled "Common areas of divergence, strength, challenge". Below the subtitle is a graphic of three cards made to look like they are from a card game. The top card's text is visible and says: "Divergence: Fine motor skills; gross motor skills; sequencing; visuo-spatial processing; working memory; coordination; proprioception."*

Charlotte Clewes-Boyne: And finally, we have dyspraxia. The

dyspraxic brain diverges mainly in: fine motor skills; gross motor skills; sequencing; visuo-spatial processing; working memory; coordination; and proprioception. Proprioception refers to our sense of where our body is within a space, and its movements and actions.

If you are dyspraxic, your strength might lie in: creativity; empathy; problem solving; verbal communication; long term memory; strategic thinking; and auditory skills.

In terms though of areas of challenge, they may involve: coordinating movement; organisation and time-keeping; putting things and ideas in order; spatial awareness; balance; directions; and short term memory. So that's everything for our slides. You can see all the references on the slides if you do want to have a further look.

Slide 28 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "References: slides 4, 5, 9". Text below says:"*

SpLD diagnosis rules out intellectual disability (DSM-V)
- *Third of autistics intellectually disabled (National Autistic Society n.d.)*
- *Autism: high but imbalanced intelligence (Crespi 2016)*
- *Low IQ does not cause ADHD differences (Rommelse et al 2016)*
- *ADHD, High Intellectual Ability, Twice Exceptionality (Cervantes et al 2022)*
- *SpLDs typically normal intelligence:*
  - *Dyscalculia (Shalev 2000); dysgraphia (Döhla et al 2018); dyslexia (Cunningham 2021); dyspraxia (Dyspraxia Foundation 2017)*

Underdiagnosed:
- *ADHD (Katzman et al 2017)*
- *Autism (O'Nions et al 2023)*
- *Dyscalculia (Morsanyi 2018)*
- *Dyslexia (Cunningham 2021)*
- *Dyspraxia (Carslaw 2011)*

Across the lifespan:

- *Missed as child, different as adult (dyslexia, dyspraxia) (Moody et al 2014)*
- *Dyslexia impacts worsen with age (Kirby et al 2018)*
- *ADHD (Godfrey et al 2020)*
- *Autism (O'Nions et al 2023)*
- *Dyscalculia (Vigna et al 2022)*
- *Dyspraxia (Gomez et al 2015)"*

Slide 29 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "References: slides 11, 12, 13, 14". Text below says:"*

- *School to prison pipeline (Mallett 2023; Day 2022)*
- *ADHD:*
  - *Up to 80% - 1+ psychiatric disorder (Katzman et al 2017)*
  - *Negative social/work impacts (Katzman)*
- *Autism:*
  - *Unmet needs (O'Nions et al 2023)*
  - *Health inequality (O'Nions)*
  - *Employment/wage gap (Wilczynski et al 2013)*
- *SpLDs – emotional distress (Livingston et al 2018) 46% increased risk suicide attempt (Fuller-Thomas 208)*
- *Dyscalculia: negative emotional/academic/employment outcomes (Vigna et al 2022); school absence/failure (Haberstroh et al 2019)*
- *Dyslexia: 60% - 1+ psychiatric disorder (Margari et al 2013) increased risk negative emotional, social, educational, empoloyment outcomes (Livingston et al 2018) including wage gap (Beer et al 2014)*
- *Dyspraxia: emotional/economic toll, co-occurs (Meachon 2017)*
- *Differences in executive function (Silverstein et al 2017)*
- *Differences in executive function/brain structure (Silverstein et al 2017)*
- *Reduce risk of mortality, suicidality, criminality, and substance abuse. Earlier treatment, better life prospects. (Katzman et al 2017)"*

Slide 30 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "References: slides 15, 17, 19, 20, 22. Text below says: "*

- *Double empathy problem (Milton 2012)*
- *Mind blindness (Edey et al 2016)*
- *MA impacts performance particularly in maths avoidant adults (Devine et al 2017)*
- *77% of children with MA at least average maths performance (Devine)*
- *Time and measure estimation (Vigna et al 2022)*
- *Phonological, auditory, and visual magnocellular processing differences (Döhla et al 2018)*
- *Letter reversal common myth (Cunningham 2021); visual disturbances/visual processing differences (Moody et al 2014)*
- *Rare impacts restricted to reading/writing (Kaplan et al 1998)*
- *Dyspraxic differences (Meachon 2017)"*

Slide 31 description: *The neurodiversikey® logo sits in the top right corner against the lilac background. The slide is titled "Thank you" and text below says "Email us: info@neurodiversikey.com Contact form: www.neurodiversikey.com/contact Find the full deck of neurotype cards at: www.neurodiversikey.com/resources If you're a neurodivergent law student of legal professional please take our survey www.neurodiversikey.com/surveys*

Mark Bradshaw: Thank you very much then to all three speakers this evening for a fantastically informative presentation. Thank you again, I know I've learned much from this evening and I hope that everyone who has attended has too, and it's only through organisations such as neurodiversikey® that myths such as those we've looked at those evening are busted and knowledge is shared about neurodiversity. Can I just send one final reminder about the surveys. I know that's an important part of neurodiversikey®'s work so, please if you do get the opportunity please do complete those surveys and you can find contact information about neurodiversikey® on the screen at the moment. It's fantastic to have been a part of Neurodiversity Celebration Week. Thank you very much to everyone and I'll wish you all a good evening.