Neurodiversity in doctors and its impact on their profession

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Summary

All of us fall within the spectrum of neurodiversity, a model which categorises human cognitive variation in the context of biodiversity, instead of a threshold at which normal becomes pathological. Through my perspective as a neurodivergent medical student, and those of neurodivergent readers of my blog, created in search of examples of 'people like me' who have succeeded as doctors, I illustrate the reasons why neurodivergent doctors are an asset to the medical profession:

- Positive characteristics of neurodevelopmental 'disorders' such as attention to detail, high energy and empathy
- Positive examples of neurodivergent success to challenge negative stereotypes and stigma
- Informed empathy and advocacy for the benefit of neurodivergent patients, using their unique lived experience as neurodivergent doctors

I also describe the barriers facing realisation of this potential, including stigma (both external and internalised), a lack of neurodivergent role models in medicine, and a lack of accessibility in our neurotypical-centric society. My analysis ends with a summary of the changes needed for the medical profession to take full advantage of the benefits of neurodiversity.

What is neurodiversity?

All of us fall within the spectrum of neurodiversity, a model which categorises human cognitive variation in the context of biodiversity, instead of a threshold at which normal becomes pathological. In a nutshell, the neurodiversity movement reframes deficits as differences.

Those with conditions that under an impairment-focused view are considered pathological, are often referred to as being neurodivergent, and their ‘normal’ counterparts as neurotypical.
Several conditions are commonly associated with neurodivergence. These include neurodevelopmental conditions, such as attention-deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD, or autism) and dyslexia. Mental illnesses like depression, schizophrenia, and bipolar affective disorder are often also considered qualifiers of neurodivergence (1).

Neurodiversity arose from the autistic community, as an identity for those who considered themselves as neurologically different, rather than disabled. It was first given its name by Judy Singer, a sociologist and autism rights advocate, and was further popularised by the journalist Harvey Blume. Since its first mention in 1998, the term has been adopted by groups outside the autism rights movement, who believe that ‘disabled’ is far too often considered synonymous with ‘impaired’. In just over two decades, the neurodiversity movement has grown to be recognised in many fields, including education, business and medicine (2).

Neurodiversity in doctors

There is unfortunately no reliable data on the overall prevalence of neurodivergence among medical professionals, so it is difficult to quantify how significant neurodiversity may be in the medical profession. The available literature is sparse, largely qualitative, and often focused on autism alone, but can be used in estimates.

The estimated prevalence of autism in the general UK population is 1.1%, and may represent a similar proportion in UK doctors - one survey's findings, although focused on support offered to neurodivergent patients, found that 1% of general practitioner respondents identified as autistic (3). Using data from the general population, the Royal College of Psychiatrists (RCPsych) estimate that at least 3000 doctors practising in the UK may be autistic. However, they also advise that this number is likely to be a vast underestimate, as autistic strengths may be actively selected for in medicine, and not all individuals with autism are recognised or diagnosed (1).

Several factors are likely to affect the true prevalence of neurodivergence in doctors, the most prominent being identification. Neurodevelopmental conditions affect individuals of all ages, but presenting characteristics vary between different stages in the lifespan. Although most diagnoses occur in childhood, many still slip through the net until adulthood, when coping strategies become insufficient in meeting the demands of adult life. Growing public awareness of neurodevelopmental conditions in adults, or a diagnosis in a family member with similar traits, are the most common precipitating factors to a late diagnosis of underlying autism or ADHD (4).

Women and ethnic minorities are particularly affected by missed diagnoses, but neurodivergence may also be under-identified in doctors. Medical school admissions select candidates who are intelligent, conscientious high-performers - strengths which may inadvertently mask their difficulties. Some argue that common autistic traits, such as paying close attention to detail, can be perceived as ideal professional qualities, and therefore positively selected for (1).

What can neurodivergent doctors offer the profession?

Although this may not always be recognised, individuals with conditions under the ‘neurodiverse’ umbrella have several strengths.

Autistic individuals, on whom the majority of available literature is focused, may have significant strengths in focus, attention to detail, and pattern recognition. These are attributes that can aid them in many professions, but are especially valued in medicine (6). Dyslexia, although being popularly known for struggles with written language, is associated with greater visual-spatial abilities and processing speeds for some types of visual information than non-dyslexic control groups (7).

Although ADHD is often associated with poor outcomes in academic, vocational and social domains (2), the literature does admit some positive aspects. Those most frequently described are high levels of energy and drive, the ability to hyper-focus, and greater empathy. The ADHD brain is driven by interest, and has greatly increased productivity when engaged in something enjoyable or new, as a result of increased

dopaminergic stimulation (6). This curiosity-driven information seeking, also known as ‘deprivation curiosity’ is associated with positive effects on learning, and may aid clinical reasoning and diagnosis (8).

These positive traits may help to explain why the ‘disorders’ are still genetically pervasive. The hallmark symptoms of ADHD - hyperactivity, distractibility, and impulsivity - could have been advantageous to early hunter-gatherers, quickening their response to environmental stimuli such as predators. Overall, the unexpected strengths of neurodivergence are a key factor driving the shift towards reframing mental disorders with the neurodiversity model, considering the positives of neurological variation in balance with its weaknesses.

An example for colleagues

The explosion of social media platforms has allowed the connection of neurodivergent individuals with others they would never have crossed paths with otherwise. This has led to the conception of massive online communities offering support, but also new ways of raising awareness of the neurodiversity movement.

I must admit to personal experience in this area. In the first lockdown of 2020, the announcement that my upcoming medical school exams would be going ahead was more anxiety-inducing for me than most. I was on academic probation for inadequate performance, and close to being asked to leave the course - and the end of my dream of becoming a doctor. By chance, I read a news article describing the long waiting lists for NHS ADHD assessments. The stories of the patients interviewed resonated so

strongly with me, that I used my student overdraft to fund an assessment - I was eventually diagnosed with ADHD and dyslexia. The diagnoses gave me access to reasonable adjustments in both teaching and exams, and a year later, my grades had risen from a borderline pass, to an upper second-class honours.

Despite finally having the tools needed to reach my potential academically, I had never felt more alone. I couldn't find any examples of neurodiverse medics, and worried medicine was therefore not for 'people like me'. I decided to be brave and make the first move. With desperation for connection in the year where we all stayed at home, I started a blog.

Two years later, I am admittedly perplexed by the popularity of Attention Deficit Doctor - named for the fanciful thought that if I put my dream in writing, then it would one day be so. At first, it was simply an outlet to share the thoughts that I didn't dare share 'offline' for fear of judgement. Anonymity became increasingly difficult, and despite fearing negative reactions, I decided to be the example that I didn't have when I was diagnosed. My story has reached more of the medical profession than I ever thought it would, and I have been honoured to hear the stories of my neurodiverse peers in return.

Informed empathy and lived experience

Doctors with lived experience of a health condition often have an understanding and empathy for patients with the same diagnosis which is unparallelled in their unaffected colleagues. This is recognised by the General Medical Council, who state that "a

diverse population is better served by a diverse workforce that has had similar experiences and understands their needs" (9).

Parts of accessing healthcare that seem straightforward to neurotypical doctors, such as phoning to make an appointment, getting to the surgery or hospital, and even the physical environment of the clinic, can be overwhelming barriers to their neurodivergent patients (4). Doctors with lived experience of neurodivergence are more likely to recognise and understand these problems. This unique insight is greatly advantageous in improving access for neurodivergent patients.

A common assumption is that autistic doctors are more likely to struggle with a lack of empathy and communication skills, and consequently will gravitate to specialties with less patient contact such as pathology and radiology. This is widely disputed, most notably by Autistic Doctors International (ADI), a group of autistic doctors offering peer-support and advocacy, and for whom doctors in highly-relational specialties, such as general practice and psychiatry, make up the majority of their membership (10). Although autistic patients report difficulties communicating with neurotypical healthcare professionals, ADI additionally asserts that autistic people find it easier to communicate with autistic peers.

Autistic patients face significant health disparities, and much controversy still remains on whether autism is 'curable'. The neurodiversity model views autism as part of a spectrum of natural variation, and so to 'cure' autism within this context would be an act

of eugenics. Although advocates oppose work aiming for the eradication of autism, they encourage research and services that aim to improve the quality of life of autistic people (12). When this is misunderstood, it can lead to conflict. Additionally, neurotypical parents may have differing opinions about quality of life to their autistic children, and with good intentions expose them to interventions with little documented benefit but significant risks of harm. Autistic doctors possess invaluable insight both as advocates and guides for patients and families in these discussions.

Barriers to the realisation of neurodivergent potential

In the corporate world, diversity in teams is recognised to be advantageous, and indeed RCPsych stated in 2022 that “a diverse workforce is a well-rounded workforce”. So why are these benefits rarely acknowledged?

Specific learning differences and mental health conditions are dimensional disorders, and their characteristics exist on a spectrum. Not all symptoms result in homogenous impairment between individuals. It is for this reason that one may be described as having “high-functioning ADHD” - they meet the condition’s diagnostic criteria, but are perceived to function relatively well by societal standards (5).

However this label does not signify the total absence of deficits. In the case of ADHD, positively-perceived traits such as hyper-focus may simply compensate for the condition’s impairing characteristics. Patients who are labelled in this way are often deprived of necessary support, or are subject to false assumptions about their ability

(12). The neurodiversity movement emphasises that we exist on a cognitive spectrum, and as such, there is also variation in the characteristics, strengths and weaknesses of neurodivergent individuals.

Where are our role models?

The role of seniors in acting as role models for professional values, attitudes and behaviours is a long-standing and important part of the medical profession (3). Good role models are often a motivational influence to the professional development of their colleagues, and in many cases can inspire in us the skills and mindset needed to rally through the challenges of a medical career (13). Role models may influence our career choices, from the location in which we work to the discipline we specialise in (14). Therefore a lack of suitable role models, an absence of examples to guide, motivate and inspire us, confers a significant disadvantage.

In a 2020 British Medical Association survey, two-thirds of respondents believed that there were no visible senior role models for disabled doctors in their workplace. One respondent commented “If I know that a registrar or consultant battles with mental illness, I won’t feel that alone. I’d feel reassured that if they could get to that stage, then certainly I will get there too.” (15).

Individuals with lived experience of neurodivergence more commonly hear about their diagnoses in the context of their deficits, rather than their strengths (7). This makes positive role models especially important for this group. One message from a medical student reader of my blog illustrates this well: “I was so surprised to find a person who is

in a similar situation as me, I've been so embarrassed and couldn't find anyone who'd been through the same, never mind been successful"

Internal and external stigma

Stigma and misconceptions surrounding neurodivergence are disappointingly widespread in the medical profession. One email about my blog reads: "You're brave to go public with your ADHD diagnosis. General knowledge surrounding ADHD in doctors is really poor and I'm really wary of what my colleagues might say if I got a formal diagnosis".

Autistic doctors are particularly likely to refrain from disclosing their diagnosis, for fear that pervasive autistic stereotypes, such as lacking empathy, will diminish their professional credibility (1). The BMA's 2020 survey additionally reported that only 36% of their doctor and medical student respondents felt comfortable disclosing their disability at work, and 77% were fearful of discrimination if they did disclose. Particularly disappointing is the finding that only 46% of those who did disclose their disability had been met with support from colleagues.

One anonymous respondent commented that "there seems to be an attitude amongst many healthcare staff that some specific learning disabilities / disability diagnoses are just "excuses" and "labels" for issues that apparently most people deal with." (15).

A recent review found that over half of the literature on ADHD contained stigmatising language (11), but one does not need to read medical research to find examples of

negative attitudes. In a Reddit community for junior doctors, one comment on a post about reasonable adjustments for ADHD reads - “an amended lunch break because you have ADHD… what a f*cking world we have created”. Another doctor comments “the sooner this obsession with being diagnosed with neurodiversity ends, the better”. It is grossly troubling that these words come from medical professionals, who may have no duty of care for their colleagues, but certainly do for their neurodivergent patients.

As a result, masking behaviour is common in environments where a deviation from the neurotypical norm is likely to lead to discrimination. Individuals may mirror the ‘normal’ behaviour of others, or suppress stimming (self-soothing behaviours such as tapping feet or fidgeting). Masking is associated with increased anxiety, depression and suicidal thoughts (10), ultimately contributing to poor mental health outcomes for neurodivergent doctors.

Medical professionals are usually trained to think about neurodevelopmental conditions in the context of a deficit model. One doctor illustrated the ‘tragedy narrative’ often associated with neurodivergence in her description of the moment she was told her child was autistic - “Images of Rain Man filled my mind, quickly followed by painful memories of security officers trying to restrain my beloved 350 pound adult autistic patient during a violent meltdown.” (12).

This approach informs interactions with our patients, and so this deficit-based view is mirrored in the perceptions of the non-medical general population. A Google search for

the term ‘ADHD’ will produce web results largely focused on the impairments and problems associated with the condition. Adopting this perspective increases the likelihood that the strengths of neurodivergence will remain unseen, and contributes to a narrative that a diagnosis of a neurodevelopmental condition is an inherently negative event (1).

These attitudes also contribute to internalised stigma, where neurodivergent individuals absorb these negative messages and stereotypes about professional norms and neurodiversity, and apply these criticisms to themselves. Internalised stigma is strongly associated with imposter syndrome, which has demonstrated effects on the wellbeing of doctors, and is associated with burnout and mental illness. The prevalence of imposter syndrome is known to be higher in marginalised groups, of which the neurodivergent are one.

Accessibility

Although neurodiversity reframes conditions in the context of natural neurological variance and its positives, rather than as pathological deficits, the concept of disability is not removed. The movement argues that although impairments are real, they are greatly exacerbated by society’s neurotypical-centric design (12).

The professional difficulties described by neurodivergent on social media rarely relate to patient care. Some specific aspects of a medical career, which are too often unquestionably accepted as part of the job, disproportionately inhibit the work of neurodivergent doctors.

Some neurodivergent doctors may find difficulty in navigating opaque neurotypical norms like organisational hierarchy, which can dominate interactions with colleagues. Neurotypical individuals may not realise just how difficult spoken language can be to interpret for their neurodivergent colleagues. Metaphors, slang, inside jokes and body language are all potential traps for misunderstandings, which may have consequences for patient care, team dynamics, and potentially the most worrisome for doctors, career progression. Another challenge is the frequent changes in routine necessitated by varying shift patterns. Autistic doctors may need predictability and routine for optimal functioning, and face inflexibility and a lack of understanding when they ask for this (10).

Reasonable adjustments in the workplace can include flexible working, a quiet space to complete paperwork, dictation software, and extra time to complete written exams. However, there are various barriers to securing these adjustments. They often require lengthy and complex processes to arrange, which can be a significant challenge for those with the shortened attention span often associated with ADHD. Other common issues are delays to implementation, or far too often, a complete lack of intervention until a doctor reaches crisis point. Some doctors report that service pressures and funding are used as excuses to refuse adjustments, despite reasonable adjustments being required by law, and often funded by schemes such as Access to Work (15). This ultimately holds those affected back from achieving their full potential (1).

ADI's founder, an autistic doctor herself, offered a poignant description of the unequal recognition of barriers for those with disabilities - "No one would fail to recognise a staircase as a barrier for a physically disabled person. It is far less common to recognise communication and sensory barriers for those of us who are autistic." (10)

To encourage disclosure, and therefore improve access to reasonable adjustments in the workplace, we need to promote a culture of acceptance of our cognitive differences. One step towards a better culture is creating safe spaces for open discussion between neurodivergent and neurotypical professionals, so understanding can improve and misconceptions can be corrected.

What We Need to Succeed

In the midst of a growing struggle to recruit and retain doctors, the medical profession has a lot to learn from the neurodiversity movement. Its message encourages us to reframe our individual deficits as differences, and embrace the strengths of a neurodiverse medical profession.

A significant priority is improving awareness of neurodiversity, an area in which progress is good. We have overall seen many improvements in the implementation of adjustments for disabled doctors, but we still desperately need a shift in attitudes, and challenging stigma and stereotypes is essential to this.

Bibliography

1) McCowan, S., Shaw, S., Doherty, M., Grosjean, B., Blank, P., & Kinnear, M. (2022). A full CIRCLE: Inclusion of autistic doctors in the Royal College Of Psychiatrists' values and Equality Action Plan. The British Journal of Psychiatry, 221(1), 371-373. doi:10.1192/bjp.2022.14

2) Duong, Diana, and Lauren Vogel. "Untapped Potential: Embracing Neurodiversity in Medicine." CMAJ. CMAJ, July 18, 2022. https://www.cmaj.ca/content/194/27/E951.

3) Able, Stephen L., Joseph A. Johnston, Lenard A. Adler, and Ralph W. Swindle. "Functional and Psychosocial Impairment in Adults with Undiagnosed ADHD: Psychological Medicine." Cambridge Core. Cambridge University Press, September 29, 2006. https://doi.org/10.1017/s0033291706008713.

4) Crane L, Davidson I, Prosser R, Pellicano E. Understanding psychiatrists' knowledge, attitudes and experiences in identifying and supporting their patients on the autism spectrum: online survey. BJPsych Open 2019; 5: E33.

5) Taylor, Georgina. "Embracing Neurodiversity in Medicine." Australian Journal of General Practice, 2021. https://doi.org/10.31128/ajgp-03-21-1234e.

6) Armstrong, Thomas. “The Myth of the Normal Brain: Embracing Neurodiversity.” AMA Journal of Ethics, vol. Volume 17, no. Number 4, 2015, pp. 348-352, http://dx.doi.org/10.1001/journalofethics.2015.17.4.msoc1-1504.

7) - Moore S, Kinnear M, Freeman L. Autistic doctors: overlooked assets to medicine. Lancet Psychiatry. 2020 Apr;7(4):306-307. doi: 10.1016/S2215-0366(20)30087-0. PMID: 32199503.

8) Sedgwick JA, Merwood A, Asherson P. The positive aspects of attention deficit hyperactivity disorder: a qualitative investigation of successful adults with ADHD. Atten Defic Hyperact Disord. 2019 Sep;11(3):241-253. doi: 10.1007/s12402-018-0277-6. Epub 2018 Oct 29. PMID: 30374709.

9 - Welcomed and Valued: Supporting disabled learners in medical education and training (2021). General Medical Council. Available at: https://www.gmc-uk.org/education/standards-guidance-and-curricula/guidance/welcomed-and-valued (Accessed: February 25, 2023).

10) Doherty, M., Johnson, M. and Buckley, C. (2021) Supporting autistic doctors in primary care: Challenging the myths and Misconceptions, British Journal of General Practice. British Journal of General Practice. Available at: https://doi.org/10.3399/bjgp21X716165 (Accessed: February 26, 2023).

12) Nicolaidis, Christina. “What Can Physicians Learn from the Neurodiversity Movement?” Journal of Ethics | American Medical Association. American Medical Association, June 1, 2012. https://journalofethics.ama-assn.org/article/what-can-physicians-learn-neurodiversity-movement/2012-06.

Doherty, Mary, Mona Johnson, and Carole Buckley. “Supporting Autistic Doctors in Primary Care: Challenging the Myths and Misconceptions.” British Journal of General Practice. British Journal of General Practice, July 1, 2021. https://doi.org/10.3399/bjgp21X716165.

13) Paice E, Heard S, Moss F. How important are role models in making good doctors? BMJ. 2002 Sep 28;325(7366):707-10. doi: 10.1136/bmj.325.7366.707. PMID: 12351368; PMCID: PMC1124228.

15) The BMA (2022) Disability in the medical profession, The British Medical Association is the trade union and professional body for doctors in the UK. British Medical Association. Available at: https://www.bma.org.uk/advice-and-support/equality-and-diversity-guidance/disability-equality-in-medicine/disability-in-the-medical-profession (Accessed: February 26, 2023).