

# **Guide to Practice-Based Learning** (PBL) for Neurodivergent Students

### **Foreword**

This Guide to Practice-Based Learning (PBL) for Neurodivergent Students reflects the voices of those who are members of the neurodiverse community.

As an occupational therapist who is autistic and dyslexic, I can relate to the personal experiences that neurodiverse students have shared within this guidance; furthermore, I am encouraged to reflect on my own previous instances of clinical placements, which were often met with confusion and anxiety. Being able to arrive on PBL experiences with this guidance will support the student and educator in initiating discussions about reasonable adjustments.

It is important that as a neurodiverse community our voices are heard, as we are experts through our own living, studying, and working as neurodivergent individuals. This guidance has allowed the authors as neurodiverse students to share their experiences and to participate in shaping decisions that affect their learning and journey to becoming registered clinicians. These shared experiences will give expert knowledge to all those involved in making clinical practice environments a safe and supportive place for neurodivergent individuals to grow and evolve.

The person, environment, and occupation performance model is an occupational therapy model that is reflected within this guidance. This model is holistic in that it recognises the impact the environment has on individuals' performance of occupations (Duncan, 2021). Acknowledging the differences of individual neurodivergent students, the strengths they bring to clinical placements, and how their needs can change (depending on the clinical placement environment and its presenting challenges) is echoed throughout this guidance and is an example of using this occupational therapy model in context.



The guidance tips on reasonable adjustments gives educators permission to be flexible and creative in their provision of the PBL experience and to keep the neurodivergent student in the centre of decision-making when addressing these adjustments.

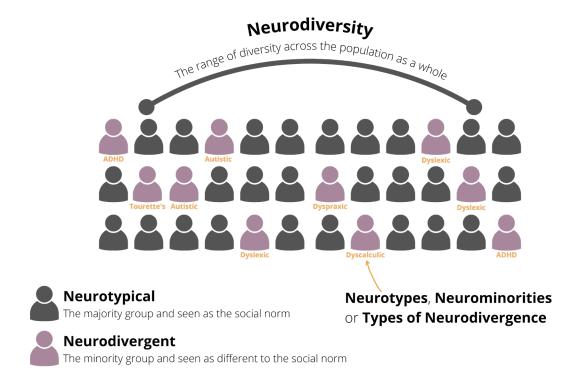
Our spikey profiles exemplify how we vary from what's classed as the norm; as a neurodiverse community we are accustomed to thinking about and/or doing experiences differently. This guidance encourages our clinical educators to join us in this 'thinking and doing' style which we hope provides them with lifelong learning, as their support as educators will for the neurodivergent student.

Laura Farr
Occupational Therapist and Allied Health Professional (AHP) Workforce Lead

### **Definitions**

#### **Neurodivergence**

There are four key terms when discussing this topic. Firstly, neurodiversity describes the population as a whole and recognises the diversity of different brains. Secondly, neurotypical describes the majority group that perceives the world, learns and expresses themselves in ways that are seen as the societal norm. Thirdly, neurodivergent describes the minority group that diverts from said norm. Finally, neurotype (or neurominorities) is the term for a person's type of neurodivergence, e.g. ADHD, dyslexia, etc.



### **Practice-Based Learning**

PBL takes many forms depending on the course and profession, from community and home visits to working in some of the busiest hospital departments. This gives students an opportunity to experience and explore the workplace practicalities of their chosen profession, alongside applying and consolidating the theoretical knowledge they have learnt from the academic aspects of their course. PBL follows a planned structure to research learning outcomes by presenting the chance to practice skills with patients and service users while under supervision. PBL is a requirement of professional registration and usually involves assessments.

## Introduction

The purpose of this guide is to increase the awareness of neurodivergence in healthcare education, share experiences from neurodivergent students and suggest methods for students and clinical tutors or practical educators to support the neurodivergent student population within practice-based learning.



The authors of this guide encourage students to seek out a diagnosis, disclose their diagnosis and be honest about any challenges they face. It is only through these processes that can support be successfully provided.

There are many types of neurodivergence commonly discussed within the neurodivergence paradigm and this is continuing to evolve. However, this guide will focus on the challenges presented by the following conditions: autism, ADHD, dyscalculia, dyslexia and dyspraxia.

#### **Autism**

Autism affects how people communicate and interact with the world (National Autistic Society, 2022). It is characterised by a triad of challenges, namely; deficits in social skills, difficulty with communication and the presence of restrictive or repetitive behaviours (Hendricks & Palko, 2022). Autism is usually present with sensory impairment, whereby individuals can be under or over-sensitive to certain stimuli, such as noises, taste, light or touch (National Autistic Society, 2022). An autistic person can be described as someone with Autistic Spectrum Disorder - ASD (DSM definition), although some prefer Autistic Spectrum Condition as it removes the negative connotations of 'disorder'. Autism Spectrum Disorder is an umbrella term which previously incorporated many different defunct terms for autism like Asperger's, Low functioning Autism, High Functioning Autism, etc. The important thing to remember about Autism is that people experience the condition on a spectrum and can experience it completely different to others with the same diagnosis. As individuals, autistic people will have different strengths and weaknesses.

#### **ADHD**

ADHD (Attention Deficit Hyperactivity Disorder) is clinically described as difficulty with maintaining attention on a singular task, feeling or acting hyperactive and being impulsive (Crimlisk and Niccol, 2021). It is often misunderstood as something that only presents in childhood, but this is incorrect as ADHD is a long-life condition estimated to be part of 366.33 million adults' lives across the world (Song et al., 2021). ADHD can mean vast impacts on a person's life, affecting their executive function, emotional regulation, working memory, time regulation, sleep and tolerance for stress and sensory information (ADHD Foundation, 2022).

# **Case study**

# **Chloe (Occupational Therapy)**

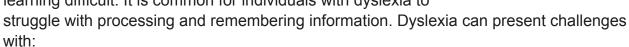
I have ADHD and I unfortunately overslept once on placement. Experiencing issues with sleep is a common but underappreciated challenge of ADHD. When I told my practice educator about the difficulty I had, I felt I was being judged and interrogated about my morning routine. It didn't feel that placement were able to provide a safe space and there was no understanding about why I had difficulty waking up to an alarm. When I explained that my Dad and I have an agreement, where he would call me in the mornings for the next 2 weeks, the placement wanted my Dad's number. They also wanted me to text on the dot at 9am. I remember feeling violated and embarrassed. I felt very stressed about this and they would ring instantly if I hadn't sent the text. I felt like a school child being punished. I then had to break down in tears before they let me text them up until 9am so the pressure wasn't as intense.

I was told I needed to prove that I could meet my professional conduct on my learning contract. I tried explaining that due to my ADHD affecting this the one time, it was discrimination as I'm protected under the discrimination act and that it should be a positive support plan not a punishment or something I had to prove. I was only ever late once on that placement, my Dad called me for 2 weeks to get back on track. I continued texting them for the rest of that placement which caused me stress. I wish I hadn't disclosed my ADHD-related challenges that morning as my Dad and I have a good family arrangement. I felt that it was taken out of control and my dignity was stripped. When was the last time a workplace asked for your Dad's number to call him if you're late? When was the last time you had to text your boss you're up because you were late once?

Personally, I would have found this situation much easier if the practice educator came with a non judgemental attitude and asked how we can help you to feel supported to which I would have explained my family arrangement. The practice educator should have then left it there with no advancements unless there was another incident, which there wasn't. It would have also been helpful for the practice educator to understand the discrimination act and not have the need to 'prove' myself.

## **Dyslexia**

Dyslexia can impact a person's processing which makes reading, spelling and writing difficult. This being said, those with Dyslexia often hold skills in problem-solving and creative thinking (NHS, 2022). Dyslexia is a life-long condition which can make learning difficult. It is common for individuals with dyslexia to



- · Reading, writing and spelling
- Working memory
- Language and communication e.g. word finding difficulties, organising thoughts, pronouncing words
- Sequencing e.g. may mix up words, letters and sounds when reading/ speaking
- Information processing
- · Auditory processing



# **Case study**

### Jade (Adult Nursing)

I often feel that if I had a diagnosis sooner, I may have had more confidence in myself than I do today. I have worked within the healthcare sector for the last 12 years. Having undiagnosed dyslexia has impacted my progression and I have experienced discrimination and prejudice. Being undiagnosed has opened up the cause for doubt, with some staff questioning if I had dyslexia or if I was 'just a slow learner'. One time I reported this, and a staff member questioned if I did not have dyslexia and that I was instead "stupid". I was eventually diagnosed with dyslexia at the age of 29 and since, experienced different approaches from staff around me, often displaying more understanding and willingness to support.

From my lived experience of how undiagnosed dyslexia can impact an individual's life, I am committed to supporting others who are undiagnosed. My late diagnosis meant I went through school, college and everyday life experiencing barriers that I did not understand. I accepted there could be a high possibility that I had dyslexia, so I adapted techniques that I found on public websites. This allowed me to manage my time better and complete extended learning during my 12-year career within healthcare, going on to complete two NVQs and 'the care certificate'.

In my view, if you suspect you have dyslexia, it is best to arrange an assessment at your earliest convenience. You should seek support, an assessment and research into techniques that you can adopt to help. Dyslexia requires planning and adapting ways of working within academic settings and the workplace. I often struggle to pronounce medications which can make me feel degraded however, I understand that with confidence, explaining to staff and patients that dyslexia impacts my pronunciation, I have received some compassionate responses.

My approach to dyslexia is "owning it". Do not view it as a disadvantage but as something that makes you a better person. Dyslexia makes you work harder to achieve your goals, which gives you a greater sense of achievement. The road is not easy but being kind to yourself is also key, in my opinion.

### **Dyscalculia**

Dyscalculia is a specific and persistent difficulty with understanding numbers and can lead to a diverse range of difficulties with mathematics (Sharma, 2022). It is difficult to identify with a singular diagnostic test, which is why diagnosis and assessments carried out, utilise a range of measures. This might include a test protocol which will help with identifying which factors are creating problems for the learner. Furthermore, to help understand these difficulties, an individual person-to-person diagnostic interview can be arranged. Common presentations of dyscalculia are:



- · Difficulties with counting backwards and remembering basic facts despite practice
- · Difficulties in understanding things such as place value
- Poor sense of number and estimation
- Slowness in performing calculations
- Forgetting how to do mathematical procedures such as long division. Often addition is the strongest skill and other things such as multiplication are performed poorly or avoided.
- Poor mental arithmetic skills and consequent anxiety around the subject

# Case study

#### **Emily (Therapeutic Radiography)**

After my very first placement slot, I had an interim discussion with my mentor about how placement was going. To begin with I was nervous to talk about it because I did not know how to bring it up. I told him about having Dyscalculia as I was too nervous at the start to mention it; he was very supportive. He allowed me to talk about it, how I thought it might impact my progression and encouraged me to speak to future mentors so that they are aware. I know, at the start of each new placement, if I am in another treatment room, or in pre-treatment (CT) I will speak about this with my mentors to discuss how we can proceed. Like bringing a small calculator in with me, as I struggle with mental calculations, so it makes it easier for when I have to calculate FSD's. I also practice with the distance scale each night, as it is something that throws me from time to time. However, if you share with the staff they will gladly support and encourage you.

### **Dyspraxia**

Dyspraxia, also sometimes known as Developmental Coordination Disorder (DCD), is a form of neurodivergence most commonly associated with coordination difficulties but which can also have a variety of other impacts. Physically it often impacts a person's fine and gross motor coordination affecting their balance, posture and dexterity and can lead to increased fatigue. It also has further impacts on a person's sensory processing, memory, concentration and organisation (Dyspraxia Foundation, 2022). There are also positive elements associated with dyspraxia including strong problem-solving skills, determination and creative and lateral thinking (Patrick, 2015). However, each person's experience is different and so these aspects may not apply to everyone with dyspraxia it can also occur alongside other types of neurodivergence and may have some overlapping effects.

# **Case study**

### **Natasha (Occupational Therapy)**

I was diagnosed with dyspraxia around age 20 during my first university degree after asking the university dyslexia service to do an assessment to explore my difficulties with completing work within time limits, particularly during exams. I had never heard of dyspraxia before that assessment but when they explained it to me it made a lot of sense and felt like it fit! I was nervous to ask for the assessment but it was a really good decision to help me learn to know myself better and to have access to adjustments such as extra time and using a computer in exams. It would have been helpful though to have more guidance about it as it is only more recently that I have got to understand my dyspraxia better and how it impacts me beyond needing more time to write things. This has helped me to understand myself and others better and accept my differences more. For me, although my dyspraxia does affect my physical coordination, I notice more the mental coordination aspects of having difficulty structuring my thoughts and with memory, the fatigue, and some sensory aspects of being sensitive to loud or sudden noises.

On placements, the busy environments and fast pace can be challenging for me and can result in difficulty concentrating, completing tasks in the time available and remembering important information. Some things that have helped me with this are agreeing clear expectations with my educator from the start of placement, developing templates to help me structure notes and other documentation, finding quieter spaces to help me concentrate and allowing extra time for completing tasks. I also find writing memory prompts in a notebook through the day and writing notes immediately after working with someone rather than at the end of the day helps with memory. I have recently started using special earplugs that reduce the intensity and discomfort of noise too which make a big difference and using text to speech and dictation software also helps to complete written work aspects of placement.

# Who is this guide for?

This guide is for those studying and training in a healthcare profession as well as those that interact and play a part in the PBL of learners across different sectors, including but not limited to:

- NHS trusts
- · voluntary organisations
- · social care
- · private companies
- · arm's length bodies
- · higher education institutes.

This guide will benefit those who:

- · lead the educational aspects of their organisation
- · mentor or supervise learners
- · undertake PBL as part of their course
- manage and provide a service that hosts learners
- teach on healthcare course within a higher education institute.



# **Background**

Originally coined by Judy Singer, the term neurodiversity refers to the wide diversity of brains in the human population (Doyle, 2020). The majority function and process the world in a similar way, this is called neurotypical. However, a minority, the neurodivergent, do so differently. Neurodiversity borrows from the biodiversity model used in ecological applications and seeks to remove neurological differences away from the medical model which pathologises diversity (Hughes, 2020). Instead, from a neurodiversity viewpoint, neurodivergence is a natural variation in the population that has both strengths and weaknesses similar to other forms of individual differences (Clouder et al., 2020; Pellicano and den Houting, 2022). There is an important distinction to make as being neurodivergent in itself is not a disability, however, the challenges it presents in a world built for neurotypical people are often disabling.

It's important to note that although everyone has strengths and challenges, a neurodivergent person's challenges, and possibly their strengths, are more extreme versions (British Psychology Society, 2017). This phenomenon is often referred to as "spikey profiles". It depicts the deviation between neurotypical people's skills or learning qualities as relatively marginal in contrast to neurodivergent people's spiky appearance (Fig 1).

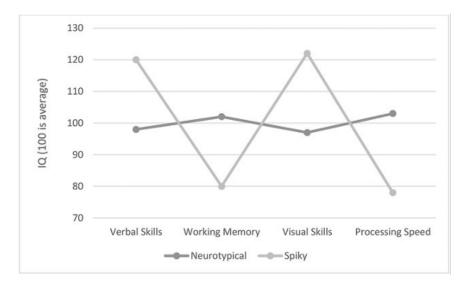


Fig 1 - An example of a "Spiky profiles" (Doyle, 2020).

In each condition, there is a severe and established issue of underdiagnosis (Young et al., 2021). Amongst this, there is a particularly evident disparity in women and girls as they are much less likely to be diagnosed and also to receive later diagnoses (Young et al., 2020; Ferri et al., 2018). This is said to be due, at least in part, to the prevailing stereotypes of each condition being focused on men and boys (Whitlock et al., 2020). This does not reflect the distinct presentations of different genders (Backer van Ommeren, 2016). There is also a disparity for minoritised ethnic groups within the UK (Strand and Lindorff, 2018). This is a complex multi-layered topic, but possible confounding factors impacting this could be a reduction in access to healthcare, racial discrimination by healthcare professionals and cultural and/or religious differences (Tromans, 2021).

Unfortunately, neurodiversity can also be misdiagnosed as a mental health condition. An individual may feel frustrated if they feel held back in achieving their potential. When unsupported, these emotions can be displayed and misconstrued as a mental health condition. These emotions and displays of stress can mask an underlying cognitive defect, propelling an individual into a vicious cycle. If practitioners hold higher confidence to speak with individuals about the possibilities of neurodivergence, this could result in referrals for confirmation. Those practitioners can also provide better support for an individual to process their diagnosis. If not managed carefully, an individual may feel vindicated which could lead to disempowerment. In contrast, if managed correctly, this could lead to barrier breakdowns, promoting an individual's strengths and building on weaknesses (Doyle, 2020).

Miscommunication between neurotypical and neurodivergent people is often blamed on the neurodivergent individual. This is typically due to a neurotypical person being unaware of disability cultures and failing to understand those perceptions and cultures. Improving communication could be achieved through cross-culture communication education. This idea is to promote communication between cultural backgrounds and the field of enquiry, for example, an individual with autism (Hillary, A. 2020).

The different conditions have a list of clinically accepted challenges, however, many of these are shared between conditions and the borders between each condition are blurred and ambiguous. For this reason, the information in this guide is categorised by challenges rather than conditions.

# **Neurodivergence in Practice-Based Learning**

Being aware of neurodiversity within practice learning allows students to flourish and build their skills. The research on neurodivergent students' experiences is limited but is conclusive in the picture it portrays. Without the correct adjustments and support, not only does students' education suffer, but their physical health and wellbeing (Griffin and Pollak, 2009; Young et al., 2021). There are many barriers that prevent the successful application of support, including the poor knowledge of staff and a reluctance to make the needed adjustments (Kendall, 2016). Under the Equality Act 2010 "reasonable adjustments" must be made by workplaces and universities to support disabled people to engage in their education without being at an avoidable disadvantage. However, these adjustments are ambiguous for some members of staff and so this hinders their use (Craig, 2018).

As much as poor support can lead to poor outcomes, it is also vital to confront students' own perceptions of their challenges. Student's internalised stigma and harmful self-beliefs contribute to their experience (Greaney, 2018). This can prevent students from disclosing their diagnosis in fear of inconveniencing the staff they are working with (Noris et al, 2019). Students often feel they can avoid disclosing and "muddle through", but this prevents them from reaching their full potential (King, 2018).

Neurodivergent individuals can bring various benefits as employees and healthcare professionals, including through associated attributes of resourcefulness, creativity and determination which can bring positive elements to their professional practice (Jung et al., 2014; Richardson, 2021). Lived experience of disability can also be advantageous to help build connections with service users and understand their perspective (Jung et al., 2014). Diversity in perspectives, skills and ways of working, including those offered by neurodivergent individuals, is beneficial to an organisation as a whole but adjustments are needed to allow people to fulfil their potential (Bewley and George, 2016).

It is important to consider that the NHS constitution states that 'the NHS belongs to us all' and as part of the NHS we are required to be inclusive and celebrate diversity in whatever form that takes.

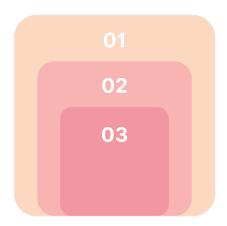


#### **Support Plans**

The most important tool for support is the placement support plan. When a student contacts a higher education institution's disabilities team to disclose a diagnosis or after gaining one through their processes, they will likely have

a discussion about how their diagnosis impacts their studies. This usually surrounds the challenges in the academic elements of the course. However, it is vital that the effect on placement is discussed too. This will often result in a separate placement-specific support plan and that should be created with the specific field of healthcare in mind. The specificity of the plan is vital, as two student nurses' support plans would be different, as would if the same student had a plan created for nursing and one created for occupational therapy. Although each field of healthcare does have many similarities, they also present unique challenges which require careful consideration.

# Support Plans Should Be:



#### O1 Placement Specific

They must focus on challenges and adjustments of practice and take into account the environment and setting of the student's placement.

#### **02** Person Specific

They must match the challenges the individual student faces, rather than generic possibilities based on prior knowledge of their condition.

#### **03** Role Specific

They must tackle the distinct challenges faced in the student's particular field of healthcare and address adjustments needed to carry out the tasks in fulfilment of their role.

The support students receive should be pre-emptive (Storr, 2010). Thus, support should be discussed as soon as possible to ensure that when placement starts, support is in place to meet the needs of the student. However, it is equally important to recognise that for many students their first placement is their first experience of the role. Therefore, a placement support plan should be evolving and adaptable. It's important to acknowledge that some challenges may not have been predicted and that more support can be provided or the current plan can be reshaped to accommodate this.



# **Tips for educators**

### **General Tips**



#### **Environment**

A significant issue surrounding students not receiving the support they need is the responsibility of disclosing falling to them. Due to stigma and a fear of the reactions to disclosing, students are not able to access support. Therefore, it is important that students feel their environment is safe, encourages open discussion and is free from criticism and discrimination. Some students are more likely to come to a teacher, tutor, or mentor that they know they can trust.



#### **Diagnosis**

For some students, it may be that they are unaware that their challenges are not due to a lack of effort but an in-built part of them. They may not understand that there is support, adjustments and accommodations available. It is important to assess students with this in mind and signpost them to university services or external sources to seek a diagnosis so they can ensure their needs are met appropriately.



#### **Education**

Increasing the awareness of neurodivergence across staff teams would directly improve students' experiences. There should be an acknowledgement that everyone is different but a level of understanding and appreciation for the different challenges that neurodivergent people face in their ability to learn, process, perform and communicate.

#### **Specific Tips**

# Supporting someone with memory challenges:

- Provide a combination of verbal and written information/ feedback
- Encourage students to write notes or create a to-do list of tasks for the day
- Email important points to the student following a meeting
- Support students in making flash cards, memory aids or visual prompts.
- If possible, offer an orientation of the clinical area prior to placement and allow the student time to make notes.

# Supporting someone with sensory processing challenges:

- Opportunities for breaks away from overwhelming sensations
- Discussion of adjustments to the environment, uniform etc to accommodate someone's sensory profile
- Provide students with information about the level of noise they should expect in certain settings, e.g. before entering an MRI department.

# Case study

#### **Bekki (Diagnostic Radiography)**

After a poor experience on my first clinical experience, I went into my second one with poor expectations. On my first day, I met with my link radiographer to go over my goals for the placement duration, and mentioned I was really struggling to learn exposure factors and I felt my dyscalculia was playing a part in it. After being told on first placement that I really needed to try and learn them quickly, I was expecting the same reaction. However, when I disclosed my concerns to both my link radiographer and the radiographer I had been working with for the week, they both told me to take my time with it and be patient with myself. I now study exposure factors at home every evening using the flashcard method and I feel much less stressed about the situation and that I can allow myself to take my time.

If a student has been taught something that is different to your technique, but ultimately it works, please don't tell them they are doing it wrong just because it's different to what you would usually do. This technique may include some prompt for the student which helps them remember what order to do things in. Telling them they are wrong can really throw them off and knock their confidence. Instead, ask the student to explain their process.

# Supporting someone who experiences fatigue:

- Opportunities for rest breaks during the day
- Flexibility in timings of shifts or tasks through the day where possible to fit the better time for someone's fatigue
- Where possible, allocate students to sites closest to their home

# Supporting someone with communication challenges:

- Give instructions clearly and give the person time to process them
- Ask them to repeat back to you what you have asked to confirm understanding.
- Use written cues if appropriate. Bullet points, step-by-step instructions and lists can be particularly helpful.

# Supporting people with disclosure of differences:

 Meet in a private or safe space where the student feels safe to discuss their challenges.

- Have an open, positive and non judgmental attitude to discussing someone's differences and how to support them
- Take time to research the student's specific diagnosis
- Be flexible and open to adapting the way you work in order to create an inclusive/ supportive learning environment.

# Supporting someone with concentration:

- Identify quieter and less busy work spaces and make these available to students
- Offer regular brief rest breaks where needed to refocus
- Allow breaks to manage transitions between tasks
- Avoid giving the student multiple tasks to complete simultaneously, e.g., questioning a student knowledge while they are carrying out a task with a patient.

# Case study

### **Katie (Occupational Therapy)**

My best placement experience I was shown around the entire place, given access to book rooms, use the library, and use the quiet room/sanctuary within the hospital. Knowing I could book out spaces was a huge help, as I like to be in the building early so I don't worry about being late! I always had a place I could work, and I actually understood from day one how to book these areas without having to ask. The quiet room was free for anyone to use, but if I hadn't been shown it I probably would have assumed it was just for families. I spent ½ hour there most mornings and sometimes went during my lunch break which was great to get away from the busy ward, or have some time to think without interruptions.

# Supporting someone with reading and writing difficulties:

- Allow additional time to complete written tasks or notes
- resist putting extra pressure on someone with written work e.g., looking over their shoulder or rushing them
- Provide access to samples/ templates for case notes, letters and reports to

- help with structuring written work
- If the Trust uses handwritten notes, give students the option to complete a rough draft of clinical notes before writing in patients' notes.
- Consider installing assistive software (e.g. Grammarly, text-to-speech technology) on some computers in the office to help with reading and structuring written work.

# **Case study**

### **Katie (Occupational Therapy)**

I've had some difficulties on placements before where I've struggled to remember the terms used within acronyms. It wasn't that I didn't understand it, it was that to see only the acronym and not the full concept was difficult for me to learn the context.

# Supporting someone with organisation and time keeping:

- Give students clear timetables or rotas as much in advance as possible.
- Set out clear tasks that need completing
- with deadlines and priority levels for these.
- Use frequent check-in with students to ensure they are aware of upcoming deadlines or important events.

# Case study

### Mary (Speech and Language Therapy)

Since being diagnosed and disclosing that I'm dyslexic, I've only had one negative placement experience where a 'one size fits all' approach was used. I've been lucky to have some supportive and flexible educators who aimed to create a safe learning environment and put reasonable adjustments in place. Some adjustments included: providing a rough outline of tasks for the day to help me better organise my day, opportunities to complete admin at home and allowing me extra time to complete reading and writing tasks.

I'm still discovering what works for me and what doesn't. My advice to other students would be to keep experimenting with different strategies and don't struggle in silence.

# Supporting someone with coordination difficulties:

- Support them to have the opportunity to physically practice doing an activity or assessment slowly before doing it with a patient or under observation.
- If possible, allow the student to work in an area which has more space to minimise risks.

# Supporting someone with information processing difficulties:

- Present information and instructions both verbally and in written form.
- · Give instructions clearly and concise
- Allow them time to process information provided and be willing to repeat things as needed
- Avoid giving too much information all in one go. Break up information into smaller chunks.



# Considering use of language and terms:

 It's important to consider the language and terminology used when discussing neurodivergence. Examples of this can be seen in the infographic for language use and autism.



## **General Tips**



# Communication and disclosure.

The more you tell your practice educator/placement

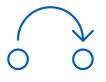
tutor and the team around you, the more they can support you. Being open and honest about your diagnosis (or lack of one), strengths, challenges, learning styles, and any extra support that may be needed throughout your placement is vital to having a successful and enjoyable placement experience.



# Recognise what you are entitled to.

There is no reason to struggle through a placement due to

neurodivergence. By law, you are entitled to adjustments and support. It is important to be honest if you are struggling. If you do not feel able to talk to the team you are working with, you could approach your practice educator/placement tutor, your university personal tutor, or your university wellbeing/disabilities team. There is a lot of support available.



#### Your support is not fixed.

Clinical environments can be high-pressured and systematic. As someone

who learns differently, do not put extra pressure on yourself to slot in that system perfectly and immediately. There is space to take your time to learn at your own speed. As you go through placement, you may find some aspects are more challenging than you imagined. Placement support plans are flexible and can be adapted should you face unanticipated challenges. It's important to maintain communication with your tutors and disabilities team to sure the support you require is able to evolve as you progress.

#### **Specific Tips**

#### Managing memory challenges:

- Carry a notebook with you all the time and take notes as you go through the day of tasks to do or things to research later
- Write or type up notes immediately after seeing each person if possible and if not write some quick prompts in your notebook for later (being careful of confidentiality of course)
- Create a to-do list of tasks for the day and cross them off once completed
- Create personalised flash cards or visual reference guides to take on placement for the times where you can not recall certain information

# Managing sensory processing challenges:

- Use break times to go to a calming environment such as out for a walk or sit in the car
- Find a less overwhelming place to work such as writing notes in an office rather than on the ward or using other available spaces eg. spare tables or rooms
- Use noise-cancelling earphones when reading/ writing notes and reports if a quiet space is unavailable

#### Managing fatigue:

- Ask for brief rest breaks throughout the day
- Negotiate flexible work arrangements such as occasionally having the option to complete admin at home

#### Managing communication challenges:

- If you have an issue that you are finding hard to verbalise, write a note or send an email.
- It is okay to be honest about what you need. For example, it is acceptable to say to someone 'please may you slow down" or 'can you repeat that for me please, I didn't understand'.
- After receiving an instruction, repeat it back to the person to check that you have understood it properly 'So it's observations for Mr Smith and medication for Mrs Bloggs'.

#### Managing concentration difficulties:

- Ask for brief rest breaks if needed to refocus
- Use any breaks as a chance to switch and rest
- If possible, take a minute or two to walk around the department or outside just to refresh

# Managing reading and writing difficulties:

- Develop templates that help to structure writing up notes or assessments
- Allow yourself enough time to complete notes and don't compare your speed of working to others
- Take a step back from your work every hour on the hour to allow your eyes to rest and your brain to refocus.
- Notify the team you are working with that reading or writing information make take you more time so there is less pressure to conform to unfair standards
- If working on a computer, use assistive tools and technology where possible.
   E.g. spell check, predictive text,
   Grammarly, speech-to-text software.

#### Managing disclosure of differences:

- Before placement, write down areas that are challenging for you and ideas of how an educator could support you with them
- Arrange a meeting with your wellbeing / disabilities team to work on a placementspecific support plan.
- Be honest and truthful with your practice educator about your challenges and how your needs can be met.
- Always ask for help, and don't struggle alone.

# **Case study**

### Ben (Diagnostic Radiography)

After getting my support plan from my university, I had a meeting with my personal tutor and practice education lead to discuss it. It was really useful to go through my challenges with radiographers so we could adapt what was suggested on the plan for the role of a radiographer. Together we came up with some effective adjustments and using their experience, they could give me extra tips and ideas.

#### Managing organisation and time keeping:

- Draw up a clear schedule for each week with tasks that need completing.
- Set alarms to remind you of important tasks through the day.
- Try and get yourself into a good routine of having your bags packed and clothes laid out the night before. This will allow you to settle into a deeper sleep and save time in the morning.
- Be prepared with forward thinking.
- Do a run-through of a morning routine and travel time, and visit your placement.
- Make a plan if you like structure and routine, use this to your advantage by planning out when you are going to do certain tasks, i.e. revision, assessments etc. Just make sure you include time to relax.
- Make a mental or physical note that as life can throw up unexpected events, that any timetable can be subject to change.

#### Managing coordination difficulties:

- · Don't rush Take your time.
- Break things into steps of 4. Similar to dancing, breaking things into sequences can help manage the coordination difficulties.
- Practice makes perfect, repetition is key here.

# Managing information processing difficulties:

- Break things down into smaller steps.
   Use post it notes to create smaller
   stages of the information you're trying
   to understand. When you have broken
   your information down, try and build it
   back up. Using post it notes allows you
   to move the information in or out and
   adjust to your ability at the time.
- Keep a notepad to hand so that you can write important notes down without the pressure of having to remember everything straightaway.

# **Case study**

### Mary (Speech and Language Therapy)

For me, dyslexia largely affects my working memory, auditory processing and my reading and writing speed. In practice, this means that I often need additional time to: organise and verbally communicate my thoughts and ideas, plan assessment/ therapy sessions and complete clinical notes and reports. I also benefit from writing down key information throughout the day as this helps me to remember longer instructions/ specific details of a conversation and ensures that I stay on schedule.

### **Katie (Occupational Therapy)**

There are a lot of outcomes to be met during placement, and at the halfway point I usually get worried that I haven't been meeting enough of them. I try to keep note of examples each week for each learning outcome, this helps me write the final report, and also lets me look back and see the progress I have made during the entire placement, rather than getting too focused on what I've achieved on each individual day.

#### References

ADHD Foundation (2022). ADHD In Adults. Available at: <a href="https://www.adhdfoundation.org.uk/wp-content/uploads/2022/03/">https://www.adhdfoundation.org.uk/wp-content/uploads/2022/03/</a>
<a href="https://www.adhdfoundation.org/">https://www.adhdfoundation.org/</a>
<a href="https://www.adhdfoundation.org/">https://www.adhdfoundation.org/</a>
<a href="https://www.adhdfoundation.org/">https://www.adhdfoundation.org/</a>
<a href="https://www.adhdfoundation.org/">https://www.adhdfoundation.org/</a>
<a href="https://www.adhdfoundation.org/">https://www.adhdfoundation.org/</a>
<a href="https://wwww.adhdfoundation.org/">https://www.adhdfoundation.org/</a>
<a hr

Backer van Ommeren, T., Koot, H, M., Scheeren, A, M. and Begeerl, S. (2016) Sex differences in the reciprocal behaviour of children with autism. *Autism*, 21(6). Available from: <a href="https://doi.org/10.1177/1362361316669622">https://doi.org/10.1177/1362361316669622</a>.

Bewley, H. and George, A. (2016) Neurodiversity at Work. *National Institute* of *Economic and Social Research (NIESR)* [Preprint]. Available at: <a href="www.acas.org.uk/researchpapers">www.acas.org.uk/researchpapers</a> [Accessed: April 16, 2022].

Sharma, M, C. (2022) Some Remediation Principles for Dyscalculia and Acquired Dyscalculia. Available at: <a href="https://www.bdadyslexia.org.uk/dyscalculia/professor-mahesh-c-sharma-full-article-bda-handbook-2022">https://www.bdadyslexia.org.uk/dyscalculia/professor-mahesh-c-sharma-full-article-bda-handbook-2022</a> [Accessed 11 June 2022].

British Psychology Society (2017). Psychology at Work: Improving wellbeing and productivity in the workplace. Available from: <a href="https://www.researchgate.net/">https://www.researchgate.net/</a> publication/335992150 Psychology at work Improving wellbeing and productivity in the workplace [Accessed 11th June 2022].

Clouder, L., Karakus, M., Cinotti, A., Ferreyra, M, A., Fierros, A, G. and Rojo, P. (2020) Neurodiversity in higher education: a narrative synthesis. *Higher Education*, 80. Available from: <a href="https://doi.org/10.1007/s10734-020-00513-6">https://doi.org/10.1007/s10734-020-00513-6</a>

Craig, A. M. (2018) An exploration of the concept of reasonable adjustments in pre-registration nursing education in Scotland. Ph.D. Thesis. The University of Manchester. Available at: <a href="https://www.research.manchester.ac.uk/portal/en/theses/an-exploration-of-the-concept-of-reasonable-adjustments-in-preregistration-nursing-education-in-scotland(378ff1b7-c031-40ee-a66d-6874fa007999).html">https://www.research.manchester.ac.uk/portal/en/theses/an-exploration-of-the-concept-of-reasonable-adjustments-in-preregistration-nursing-education-in-scotland(378ff1b7-c031-40ee-a66d-6874fa007999).html</a> [Accessed 21 February 2022]

Crimlisk, H. and Niccol, T. (2021) *ADHD in Adults*. Available at: <a href="https://www.rcpsych.ac.uk/mental-health/problems-disorders/adhd-in-adults#faq-accoridon-collapsec66f13d5-d761-4a48-aa20-9bd588fc3965">https://www.rcpsych.ac.uk/mental-health/problems-disorders/adhd-in-adults#faq-accoridon-collapsec66f13d5-d761-4a48-aa20-9bd588fc3965</a> [Accessed 11 June 2022].

Doyle N. (2020) Neurodiversity at work: a biopsychosocial model and the impact on working adults. *British Medical Bulletin*. 2020;135(1): 108–125. Available from: https://doi.org/10.1093/bmb/ldaa021

Duncan, E.A.S. (2021). Foundations for practice in occupational therapy. 6th ed. Elsevier.

Dyspraxia Foundation (2022) *Dyspraxia* in Adults. Available at: <a href="https://dyspraxiafoundation.org.uk/dyspraxia-adults/">https://dyspraxiafoundation.org.uk/dyspraxia-adults/</a> (Accessed: May 14, 2022).

Equality Act 2010, c. 15. Available at: <a href="https://www.legislation.gov.uk/ukpga/2010/15/contents">https://www.legislation.gov.uk/ukpga/2010/15/contents</a> [Accessed 20 February 2022]

Ferri, S.L., Abel, T. & Brodkin, E.S. Sex Differences in Autism Spectrum Disorder: a Review. *Curr Psychiatry Rep* 20, 9 (2018). https://doi.org/10.1007/s11920-018-0874-2 Greaney, B.G., 2018. Dyslexia in nursing and nurse education: a case study. PhD Thesis. Available from: https://etheses.bham.ac.uk/id/eprint/8312/2/Greaney18PhD.pdf [Accessed 5 June 2022]

Griffin E, Pollak D. (2009) Student experiences of neurodiversity in higher education: insights from the BRAINHE project. *Dyslexia*, 15(1): 23-41. Available from: https://doi.org/10.1002/dys.383

Hendricks, D. & Palko, S. (2022) *Autism Q&A: Autism Spectrum Disorders*. Available from: <a href="https://vcurrtc.org/research/printView.cfm/953">https://vcurrtc.org/research/printView.cfm/953</a> [Accessed 12 April 2022]

Hillary, A (2020) 'Neurodiversity and cross-culture communication', in Rosqvist, H,. Chown, N,.and Routledge, A. (ed.) Neurodiveristy studies: a new critical paradigm. Available at: https://books.google.co.uk/books?hl=en&lr=&id=-gLpDw AAQBAJ&oi=fnd&pg=PT158&dq=neurodiversity+and+ethnicity&ots=6zZL6NxGwW&sig=QhUBgUifMBvbOFMmbiWHg8IQHiw#v=onepage&q=neurodiversity%20and%20ethnicity&f=false. [Accessed 10th June 2022]

Hughes, J. A. (2020) Does the heterogeneity of autism undermine the neurodiversity paradigm? *Bioethics*, 35(1), pp.47–60. Available from: <a href="https://doi.org/10.1111/bioe.12780">https://doi.org/10.1111/bioe.12780</a>

Jung, B., Baptiste, S., Dhillon, S., Kravchenko, T., Stewart, D. and Vanderkaay, S. (2014) The Experience of Student Occupational Therapists with Disabilities in Canadian Universities. *International Journal of Higher Education*, 3(1). Available from: <a href="https://doi.org/10.5430/ijhe.v3n1p146">https://doi.org/10.5430/ijhe.v3n1p146</a>

Kendall, L. (2016) Higher education and disability: Exploring student experiences. *Cogent Education*, 3(1). Available from: <a href="https://doi.org/10.1080/233118">https://doi.org/10.1080/233118</a> 6X.2016.1256142

King, L. (2018) Link lecturers' views on supporting student nurses who have a learning difficulty in clinical placement. British Journal of Nursing, 27(3), pp.141–145. Available at: <a href="https://doi.org/10.12968/bjon.2018.27.3.141">https://doi.org/10.12968/bjon.2018.27.3.141</a>

National Autistic Society (2022) *What is autism*. Available from: <a href="https://www.autism.org.uk/advice-and-guidance/what-is-autism">https://www.autism.org.uk/advice-and-guidance/what-is-autism</a> [Accessed 12 April 2022].

NHS (2019) How to get diagnosed with autism. Available from: <a href="https://www.nhs.uk/conditions/autism/getting-diagnosed/how-to-get-diagnosed/">https://www.nhs.uk/conditions/autism/getting-diagnosed/how-to-get-diagnosed/</a> [Accessed 12 April 2022].

NHS (2022) 'Overview'. *Dyslexia*. Available at: <u>Dyslexia - NHS (www.nhs.uk)</u> (Accessed 4th June 2022).

Norris, M. et al. (2019) Students with specific learning disabilities experiences of pre-registration physiotherapy education: A qualitative study. *BMC Medical Education*, 20(1). Available at: <a href="https://doi.org/10.1186/s12909-019-1913-3">https://doi.org/10.1186/s12909-019-1913-3</a>

Patrick, A. (2015) *The Dyspraxic Learner: Strategies For Success*. London: Jessica Kingsley Publishers.

Pellicano, E. and den Houting, J. (2022) Annual Research Review: Shifting from 'normal science' to neurodiversity in autism science. *Journal of Child Psychology* and Psychiatry, 63(4), pp. 381–396. doi:10.1111/JCPP.13534.

Richardson, G. (2021) Dyslexia in Higher Education. *Educational Research and Reviews*, 16(4), pp. 125–135. Available from: doi:10.5897/ERR2021.4128

Song, P., Zha, M., Yang, Q., Zhang, Y., Li, X., and Rudan, I. (2021). The prevalence of adult attention-deficit hyperactivity disorder: A global systematic review and meta-analysis. *Journal of global health*, 11, 04009. Available from: <a href="https://doi.org/10.7189/jogh.11.04009">https://doi.org/10.7189/jogh.11.04009</a>

Strand, S. and Lindorff, A. (2018) Ethnic disproportionality in the identification of Special Educational Needs (SEN) in England: Extent, causes and consequences. [PDF] Available at: <a href="http://www.education.ox.ac.uk/wp-content/uploads/2018/12/Combined-Report\_2018-12-20.pdf">http://www.education.ox.ac.uk/wp-content/uploads/2018/12/Combined-Report\_2018-12-20.pdf</a> [Accessed 10th June 2022].

Storr, H., Wray, J. and Draper, P. (2011) Supporting disabled student nurses from registration to qualification: A review of the United Kingdom (UK) literature. *Nurse Education Today*, 31(8). Available at: <a href="https://doi.org/10.1016/j.nedt.2010.11.022">https://doi.org/10.1016/j.nedt.2010.11.022</a>

Tromans, S., Chester, V., Gemegah, E., Roberts, K., Morgan, Z., Yao, G.L. and Brugha, T. (2021). Autism identification across ethnic groups: a narrative review. *Advances in Autism*, Vol. 7 No. 3, pp. 241-255. Available from: <a href="https://doi.org/10.1108/AIA-03-2020-0017">https://doi.org/10.1108/AIA-03-2020-0017</a>

Walker, E., Shaw, S, C, K., Price, J., Reed, M. and Anderson, J. (2018) Dyspraxia in clinical education: a review. *The Clinical Teacher*, 15(2). Available from: <a href="https://doi.org/10.1111/TCT.12734">https://doi.org/10.1111/TCT.12734</a>

Whitlock, A., Fulton, K., Lai, M.-C., Pellicano, E. and Mandy, W. (2020), Recognition of Girls on the Autism Spectrum by Primary School Educators: An Experimental Study. *Autism Research*, 13: 1358-1372. Available from: <a href="https://doi.org/10.1002/aur.2316">https://doi.org/10.1002/aur.2316</a>

Young, S., Adamo, N., Ásgeirsdóttir, B. B., Branney, P., Beckett, M., Colley, W., Cubbin, S., Deeley, Q., Farrag, E., Gudjonsson, G., et al (2020). Females with ADHD: An expert consensus statement taking a lifespan approach providing guidance for the identification and treatment of attention-deficit/ hyperactivity disorder in girls and women. *BMC psychiatry*, 20(1), 404. Available from: https://doi.org/10.1186/s12888-020-02707-9

Young S, Asherson P, Lloyd T, Absoud M, Arif M, Colley W, et al. (2021) Failure of Healthcare Provision for Attention-Deficit/Hyperactivity Disorder in the United Kingdom: A Consensus Statement. *Frontiers in Psychiatry*,12(324). Available from: <a href="https://doi.org/10.3389/fpsyt.2021.649399">https://doi.org/10.3389/fpsyt.2021.649399</a>