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A Pathway for the Assessment of Adults for Developmental Coordination Disorder (DCD / Dyspraxia)

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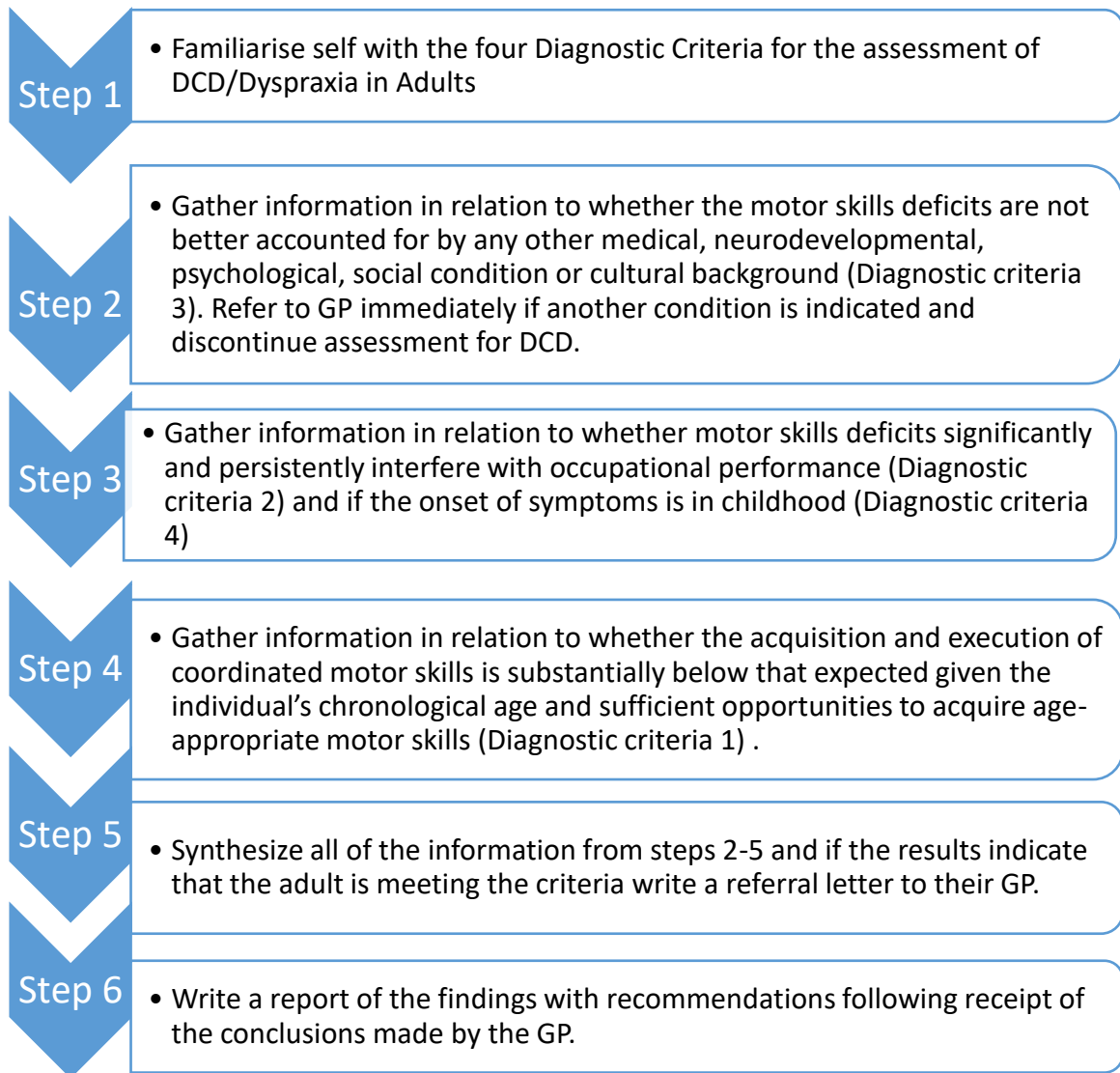


Registered

www.coru.ie State Registered Occupational Therapist

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Overview of the pathway:



Please note that the term Dyspraxia is used along with the terms Developmental Coordination Disorder and DCD as 'Dyspraxia' is the term frequently used by people in the Irish context to identify themselves with this condition.

The Lived Experience

“Knowing my diagnosis was profoundly important in enabling self-knowledge and self-compassion. Holding myself to a reasonable standard has always been difficult for me, and knowing that I am the way that I am allows me to acknowledge both my strengths and my limitations, and treat myself with the kindness which every person deserves.” A - Adult with DCD/Dyspraxia.

Step 1: Familiarise self with Diagnostic Criteria for the assessment of Adults

Please Read: Blank R, Barnett AL, Cairney J, Green D, Kirby A, Polatajko H, Rosenblum S, Smits-Engelsman B, Sugden D, Wilson P, Vincon S, (2019) International clinical practice recommendations on the definition, diagnosis, assessment, intervention, and psychosocial aspects of developmental coordination disorder. *Developmental Medicine and Child Neurology*. 61: 242–285.

This article is freely available using the following link and the necessary reading is on pages 33-45: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/dmcn.14132>

In 2019 the European Academy of Childhood Disability (EACD) produced international clinical practice recommendations addressing Developmental Coordination Disorder (DCD) in relation to definition, diagnosis, assessment and intervention (Blank et al 2019). EACD produced criteria for a diagnosis of DCD in adults which are based on the DSM-5 (American Psychiatric Association 2013) criteria with some additions in relation to adults:

1. “The acquisition and execution of coordinated motor skills is substantially below that expected given the individual’s chronological age and sufficient opportunities to acquire age-appropriate motor skills.
2. The motor skills deficit described in criterion I significantly and persistently interferes with activities of daily living appropriate to chronological age (e.g. self-care, self-maintenance and mobility) and affects upon academic productivity, prevocational and vocational activities, leisure, and work.
3. The motor skills deficits are not better accounted for by any other medical, neurodevelopmental, psychological, social condition or cultural background.
4. Onset of symptoms is in childhood.” (Blank et al 2019 p. 274).

The DSM-5 diagnostic criteria for DCD are as follows:

- I. The acquisition and execution of coordinated motor skills is substantially below that expected given the individual’s age and opportunity for skill learning and use.
- II. Motor skill deficits significantly and persistently interfere with activities of daily living and impact on academic/school productivity, prevocational and vocational activities, play and leisure.

- III. Onset of symptoms is in the early developmental period
- IV. Motor skill deficits are not better explained by any other condition. (American Psychiatric Association 2013)

The Lived Experience

"It mattered a lot that on a personal level that my Dyspraxia was diagnosed. It has helped me make sense of how I do things, how I learn and really feel like I found my missing jigsaw piece. Making sense of who I am as a person" B - Adult with DCD/Dyspraxia

Step 2: Gather information in relation to diagnostic criteria Three.

The motor skills deficits are not better accounted for by any other medical, neurodevelopmental, psychological, social condition or cultural background.

Please Read: Kirby, A., Barnet, A., Hill, E. (2018). Diagnostic Interview for DCD in Adults (DIDA). The Specific Learning Difficulties (SpLD) Assessment Standards Committee (SASC). Dr Kirby has confirmed that this tool is freely available from <https://www.sasc.org.uk/media/nzufrilu/diagnostic-interview-for-dcd-in-adults-2018.pdf>

The Specific Learning Difficulties (SpLD) Assessment Standards Committee (SASC) was established in the UK in 2005. They are an advisory and regulatory body for practitioner assessors of SpLD <https://www.sasc.org.uk/> Professor Amanda Kirby, Professor Anna Barnett, and Professor Elisabeth Hill published the Diagnostic Interview for DCD in Adults (DIDA) in 2018 as part of this committee and this is freely available. This document includes a checklist of 'red flags' (pages 13 - 15 of document) which would indicate that it would be better not to proceed with an assessment for DCD and that the person should be referred to another professional rather than coming for an assessment for DCD / Dyspraxia.

Items on the checklist ascertain if the person has previously diagnosed with any other neurological condition e.g. Cerebral Palsy, Parkinson's or Multiple Sclerosis. Information is gathered as to whether there has been any deterioration in the person's condition over the past twelve months or the emergence of a tremor or sudden loss of skills. Data is also collected in relation to any pain or swelling of the joints, mental health issues and any other reasons that may have impeded occupational participation. This checklist is recommended for use to gather information in relation to diagnostic criteria three. The information gathered using this checklist should be used in collaboration with the client to decide whether to proceed with an assessment for DCD / Dyspraxia or to immediately write a short report of the findings and send it to the person's GP.

The Lived Experience

“Not a day goes by without experiencing some aspect of Dyspraxia/DCD behaviour but I’m becoming increasingly more relaxed and accepting of it rather than feeling frustrated, insecure or anxious. It’s an ongoing process where I feel it’s important to have more self-awareness and personal acceptance rather than feel it necessary to make excuses when taking an alternative view or route outside of what is considered normal or curse at myself for my occasional awkwardness.” C - Adult with DCD/Dyspraxia

Introduction to Steps Three to Five

Dr Dorothy Armstrong conducted a scoping review to ascertain which assessment tools are used to assign participants into the group with Developmental Coordination Disorder in studies investigating this condition in adulthood. The review was conducted using the PRISMA guidelines of peer reviewed literature published between January 2008 and April 2024 using five databases: AMED, CINAHL Ultimate, Google Scholar, PubMed and Scopus. Data was extracted using the ‘Joanna Briggs Institute’ scoping review guidelines. The scoping review was written up into a journal article, submitted to the Irish Journal of Occupational Therapy and has been peer reviewed and publication is forthcoming.

The Adult Developmental Co-ordination Disorders/Dyspraxia Checklist (ADC) (Kirby et al. 2010) was the tool most frequently used to measure current and past impact on occupational performance. The questionnaire contains 40 items divided into three sections relating to occupational performance: difficulties experienced as a child, “the influence of DCD / Dyspraxia on the individual’s perception of their performance” and “current feelings about their performance as reflected upon by others” (Kirby et al 2010 p.133). A score of 56 and above is taken to signify that the person is at risk of having DCD / Dyspraxia and scores of 65 and over denote probable DCD / Dyspraxia. The ADC can be used with any adult over 16 years of age and takes between 15 and 20 minutes to complete.

The Movement Assessment Battery for Children 2 (MABC-2) (Henderson et al. 2007) was the most commonly used tool to measure the level of motor skill in adults, as there is currently no tool norm referenced to the adult population. The majority of the studies reviewed took a percentile score at or below the 15th percentile on the MABC-2 to indicate that the acquisition and execution of coordinated motor skills was substantially below that expected given the individual’s chronological age and sufficient opportunities to acquire age-appropriate motor skills. The MABC-2 was revised and updated to a third edition Movement Assessment Battery for Children - Third Edition (Movement ABC-3) (Henderson and Barnett 2023). This new version of the tool is norm referenced up to the age of 25 whereas the MABC-2 was only norm referenced up to the age of 16.

The Lived Experience

"I always thought I came out of the factory broken and that's why I was different to everyone else..... It's heart-breaking to look at how different my own life might have been if I'd known I had Dyspraxia, and so many others with whom I have got to know on my journey, each and every one wished they had known and that society knew and acted accordingly." D - Adult with DCD/Dyspraxia

Step 3: Gather information in relation to criteria Two and Four

Criteria 2: "The motor skills deficit described in criterion 1 significantly and persistently interferes with activities of daily living appropriate to chronological age (e.g. self-care, self-maintenance and mobility) and affects upon academic productivity, prevocational and vocational activities, leisure, and work."

Criteria 4: "Onset of symptoms is in childhood".

The Adult Developmental Co-ordination Disorders/Dyspraxia Checklist (ADC) (Kirby et al. 2010) can be used to gather information in relation to both criteria two and four. Dr Kirby has confirmed that this tool is freely available to download via https://www.patoss-dyslexia.org/write/MediaUploads/Resources/ADC_checklist.pdf

The ADC can be given to the client to complete. In my own clinical experience I have found it very beneficial to conduct a semi-structured interview based on the findings of the questionnaire to allow the person an opportunity to expand on their answers.

The Lived Experience

"Getting my diagnosis was like getting a new pair of glasses – things that were confusing and blurry come into focus, I can see myself more clearly and (hopefully!) move through the world a little better." E - Adult with DCD/Dyspraxia

Step 4: Gather information in relation to criteria One

Criteria 1: "The acquisition and execution of coordinated motor skills is substantially below that expected given the individual's chronological age and sufficient opportunities to acquire age-appropriate motor skills."

Complete the MABC-3 using the age band 3 criteria. The scoping review I conducted as part of the process of devising this pathway indicated that scores at or below the 15th percentile demonstrated that the acquisition and execution of coordinated motor skills is substantially below that expected given the individual's chronological age and sufficient opportunities to acquire age-appropriate motor skills.

The Lived Experience

““The diagnosis has gradually changed how I view myself. I am more patient with myself now and less frustrated. Three years later I still have “AHA!” moments when I realise that Dyspraxia explains why I do things a certain way or why it took me so long to learn something. I am more comfortable in my own skin now.” B Adult with DCD/Dyspraxia

Step 5: Synthesize all the information

Use the table below to synthesize your findings from the assessment:

Criteria	Criteria met? ✓ or X
“The acquisition and execution of coordinated motor skills is substantially below that expected given the individual’s chronological age and sufficient opportunities to acquire age-appropriate motor skills (at or below 15 th percentile on MABC-3 age band 3).	
The motor skills deficit described in criterion I significantly and persistently interferes with activities of daily living appropriate to chronological age (e.g. self-care, self-maintenance and mobility) and affects upon academic productivity, prevocational and vocational activities, leisure, and work (meets cut off scores on ADC).	
The motor skills deficits are not better accounted for by any other medical, neurodevelopmental, psychological, social condition or cultural background. <i>At this stage this is just being checked to inform the clinician whether to proceed with the assessment or to refer back to GP before an assessment is completed. Please note if the assessment is completed the client will need to be referred to the GP to check this criteria regardless.</i>	
Onset of symptoms is in childhood (meets cut off scores on this section of the ADC).	

Blank et al. (2018) recommends that the diagnosis of DCD / Dyspraxia be made by a medical doctor or a multi-professional team. If the person is found to meet all of the above criteria a letter of referral will need to be made to that person's GP. This referral must include a brief report of the evidence clearly laid out under each of the criteria. It is essential that the client then book an appointment with the GP who will be able to confirm whether a diagnosis of DCD is warranted or, depending on their findings, if further testing by a specialist is required.

The Lived Experience

"Having a word you can use to describe your experience – and the paperwork to back it up – gives you a tool both to communicate your needs to others, and to break down barriers to accessibility - forcibly if necessary. It gives you access to a network of support and information that you wouldn't otherwise have." A - Adult with DCD

Step 6: Write the report

Once a response has been received from the GP a comprehensive report of the findings with clear recommendations should be written. It is important to tailor the recommendations to the unique needs of the client e.g. to their work, leisure and activities of daily living. The following headings can be used in the formulation of the report:

- **Name:**
- **Address:**
- **Date of Birth:**
- **Age at Assessment:**
- **Background Information:** Include a brief report from the client on how their motor issues are impacting them in daily life and a summary of any relevant past reports. Include the findings of the GP and any relevant observations made during the assessment.
- **Tests Administered:** Provide a list of the assessments used.

- **Assessment Results:** Give the results of the assessments used.
- **Summary and Conclusions**
- **Recommendations**

Further Information

Below a list of other assessments you may choose to use along with the ADC and MABC-3

1. Adolescent/Adult Sensory Profile. Brown and Dunn (2002) Pearson.
2. Developmental Test of Visual Perception. Adolescent and Adult version. 2nd Edition Reynolds, Pearson and Voress (2021) Pro-ed.

References

American Psychiatric Association (2013) Diagnostic and statistical manual of mental disorders. 5th ed. Arlington (VA): American Psychiatric Publishing.

Blank R, Barnett AL, Cairney J, Green D, Kirby A, Polatajko H, Rosenblum S, Smits-Engelsman B, Sugden D, Wilson P, Vincon S, (2019) International clinical practice recommendations on the definition, diagnosis, assessment, intervention, and psychosocial aspects of developmental coordination disorder. *Developmental Medicine and Child Neurology*. 61: 242–285.

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Henderson SE, Barnett A, (2023) Movement Assessment Battery for Children-Third Edition (Movement ABC-3). London: Pearson Education Inc.

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Kirby A, Edwards L, Sugden D, Rosenblum S (2010). The Development and Standardisation of the Adult Developmental Coordination Disorders/Dyspraxia Checklist (ADC). *Research in Developmental Disabilities* 31(1), 131-139.

Reynolds CR., Pearson NA., Voress, J.K. (2021). Developmental Test of Visual Perception. Adolescent and Adult version. 2nd Edition. Pro Ed.