

Students with DCD in further & higher education: A primer for assessors

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General Issues:

1. Terminology.

Developmental Coordination Disorder (DCD) is preferred over the term 'dyspraxia'. DCD is included in the formal classification systems (DSM-IV and ICD-10) and therefore recognised internationally. Most importantly, it is associated with specific diagnostic criteria (see DSM-IV, APA, 2000).

2. Co-morbidity.

It is recognised that developmental disorders rarely occur in isolation. There is commonly co-occurrence of DCD with other developmental disorders including dyslexia, ADHD and SLI (Specific Language Impairment).

3. Developmental Course.

It is now well established that DCD continues into adulthood. Although difficulties with motor control and coordination often persist, other difficulties may also emerge in later years that give cause for concern. Serious psychiatric problems have been associated with DCD in adulthood e.g. depression and anxiety.

4. DCD in adulthood.

There is only limited information available on DCD in adulthood and we still have much to learn about the nature of DCD in adults and how it develops over the lifespan. However, the information available suggests that the condition continues to have a serious negative impact on everyday life (e.g. self care, organisation and study skills).

Assessment of DCD in adulthood:

1. *Assessment for diagnosis.* In order to obtain a formal diagnosis of DCD, the four DSM-IV diagnostic criteria must be met. For a discussion of how to apply these criteria see Sugden (2006). Recent recommendations are that motor impairment should be assessed by performance on age-appropriate tests of functional skills. Since diagnosis involves the exclusion of a definite neurological disorder, it is important that the assessment is undertaken by a suitably trained medical practitioner. *Note:* If an individual has a diagnosis of DCD from the past (i.e. before the age of 15 years) and has no updated information, then there is a need for an updated report, with evidence of persistence of motor difficulties. This evidence should be gathered from the individual and be corroborated by others, such as family member/partner and school/college staff.

2. *Assessment of motor skill – tests.*

There are few standardised motor assessments available for adults.

The BOTMP has US norms for 4-21 year-olds and the MABC-2 has UK norms for 4-16 year-olds. These tests are restricted and therefore not available to all professionals. They assess general motor competence across a range of fine and gross motor tasks (including ball skills). This range may not be appropriate for older adults.

There are some tests available that assess more specific skills e.g. the Morrisby Manual Dexterity Test and Beery Buktenica Developmental Test of Visual-Motor Integration. The Morrisby has not been tested on adults with DCD and was not devised for this purpose. It is not appropriate to rely on such specific tests to assess for motor control and coordination difficulties. The ecological validity of such tests needs to be considered for adults in further/higher education – it could be argued that neither ‘tap’ into skills relevant to the everyday life skills for students.

Tests of handwriting performance are relevant for this population as this is an area of difficulty for most individuals with DCD. Handwriting is a functional task required for progress in most educational settings and speed is a critical factor (particularly for written examinations). There are few standardised tests for handwriting speed. The DASH has UK norms for 9-16 year olds and an extension for 17-25 year olds is due to be published in late Spring 2010.

3. Assessment of motor skill – checklists.

Structured self-report measures (e.g. checklists) can be helpful for obtaining information about the severity and extent of motor difficulties. These may be used as stand-alone questionnaires or to help structure an interview. The ADC checklist (Kirby et al, 2009) is available from <http://dyscovery.newport.ac.uk> and has been standardized on student populations.

4. Assessment of motor skill – history and current functioning.

In view of the limited formal assessment tools available, it is important to take a history of the student’s difficulties. This should focus not only on motor difficulties in childhood but also on other aspects of educational performance and psychological development. An outline of the student’s perceptions of their current level of functioning across these domains should also be obtained. Whenever possible, corroboration from a parent or teacher should be sought. The current level of difficulties needs to be considered in light of the current demands on the individual in terms of their living circumstances and type of study e.g. housing arrangements (with parents or independent) and course of study (vocational/practical or academic).

5. Broader assessment issues. Some assessors may employ tests such as the WAIS or WRIT to assess performance across a range of cognitive skills (e.g. perceptual, language, memory skills). In the absence of sufficient information from other sources (e.g. school records), a measure of general intellectual ability may be required to fulfill all criteria for DCD. Although such tests may include items which involve writing/drawing or the manipulation of materials (e.g. block design or assembly tasks), since they are not designed specifically to assess motor skill, they should not replace specific tests of motor function. However, by providing a profile of performance across a range of tasks they may be helpful for gaining information about the nature and extent of difficulties beyond the motor domain.

Requirements for the future:

Guidelines are needed for the assessment of DCD in adulthood. This should contain an outline of what elements to include when taking a developmental and educational history and to ascertain current levels of functioning. These should be in line with other developmental disorders such as ASD and ADHD where there is a process of triangulation of information from more than one source.

There is a desperate need for the development of assessment tools for adults with DCD, with appropriate UK norms and adequate psychometric properties. This should include:

- An appropriate test of general motor competence
- A handwriting test
- Tests to measure competence in more specific areas relevant to students in further & higher education e.g. keyboarding tests, tests of study skills.

Useful references

American Psychiatric Association (2000) DSM-IV-TR. Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition. Text Revision. Washington, DC.: American Psychiatric Association.

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