

What is Dyspraxia?

- ❖ Dyspraxia is a prevalent childhood disability that affects 5-6% of school aged children.
- ❖ Dyspraxia is a Learning Difficulty not a Learning Disability.
- ❖ Due to terminology used by health and educational professionals, in 1994 Dyspraxia became known under the umbrella term as Developmental Co-ordination Disorder (DCD) due to its complexity and each child's uniqueness.
- ❖ DCD is a chronic neurological disorder that impairs a child's gross and fine motor skills.
- ❖ During 2022-23, 55 children attending educational settings in Wales, were recorded as having Dyspraxia.

(NHS, 2023., Welsh Government, 2023., Mencap, 2023)

Identifying DCD

Early signs of DCD may be observed by parents:-

- ❖ When age-appropriate developmental milestones such as rolling over, sitting, crawling, and walking are delayed.
- ❖ Inability to perform task which require good coordination, this can include using utensils for feeding or when trying to stack blocks
- ❖ When the ability to walk has been achieved, spatial and body awareness issues may arise, this can result in the child demonstrating awkward and clumsy behaviour

(NHS, 2023., Harris *et al.*, 2015.p. 659-665)

Signs Observed by Practitioners:-

Awareness that the child demonstrates whole body motor coordination difficulties.

- ❖ Ineffective combinations of movement sequences and the inability to defining the left- and right-hand side of their bodies.
- ❖ Difficulties in climbing, jumping, and running
- ❖ Difficulties in concentration
- ❖ Poor organisation skills
- ❖ Taking longer to pick up new skills
- ❖ Tasks maybe rushed due to reduce balance and control.

(Tran *et al.*, 2022., Bremner *et al.*, 2012)



(Source:- Lanc UK, 2016)

Diagnosis of DCD

- ❖ Developmental and Behavioural Observations
- ❖ Developmental screening that screen across all streams of development
- ❖ The Movement Assessment Battery for Children-2 (MABC-2)
- ❖ Diagnostic and Statistical Manual of Mental Disorders ([DSM-5](#))
- ❖ Diagnosis criteria for developmental motor coordination disorder (ICD-11)
- ❖ Evaluation findings of developmental tests.
- ❖ Clinical psychological or neuropsychological evaluation and psychological testing.
- ❖ Clinical history and physical examination.
- ❖ Professional diagnosis.

(BDA, 2024., Dyspraxia UK, 2023)

How to Recognise and Support Children with Dyspraxia

Challenges, Issues and Benefits of early diagnosis

Challenges and Issues of a delayed diagnosis:-

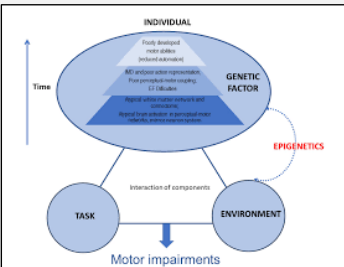
- ❖ Limits opportunities to access targeted interventions
- ❖ Regressive development
- ❖ Regressive behaviour
- ❖ Secondary consequences such as Psychological, Cognitive and Speech Difficulties
- ❖ Overlapping specific learning difficulties, such as, ADHD, ASD, and Dyslexia
- ❖ Short term memory problems
- ❖ Parents pushing for a Diagnosis – Money, Justifying a child's behaviour, Attention
- ❖ Masking symptoms
- ❖ Attitudes and the Stigma of other's

(Broomhead, 2019.p, 127., Armstrong *et al.*, 2017, p. 12., Holland *et al.*, 2018.p.329., Boyes Turner, 2017)

Benefits of early diagnosis:-

- ❖ Increase factors that positively influence a child's wellbeing.
- ❖ Decrease negative risk factors impacting a child's life.
- ❖ Identifying the child or family's needs.
- ❖ Identifying educational support.
- ❖ Inclusion.
- ❖ Each child will have a unique combination of difficulties.
- ❖ 'Whole Child' focus.
- ❖ Neurodiversity

(Welsh Government, 2021., NHS, 2023, Rudy, 2024.)



(Source:- You *et al.*, 2023)

Barriers and the impact on the child

- ❖ Lack of consistency of the diagnostic process
- ❖ Causing frustration and stress for families seeking help for their child.
- ❖ Confusing messaging and lack of support.
- ❖ Lack of knowledge about DCD amongst health and care providers.
- ❖ Inconsistent and inefficient pathways to access a diagnosis.
- ❖ Long waiting times between referrals.
- ❖ Long wait times to access diagnostic services.
- ❖ Environmental factors, such as class sizes, staff ratios and trained staff

(Warwick University, 2024., O'Dea *et al.*, 2021a ., Izadi-Najafabadi *et al.*, 2019))

Multi- Agency Approach

What is it?

- Integral working with a collaboration of professionals within a single team.
- A problem solving approach
- Enabling and enhancing inclusive education.

Who is involved?

- Occupational Health
- Physiotherapists
- Psychologists
- Paediatricians
- Education setting
- Speech and Language therapists

Why?

- Tailored to the individual child and family's needs
- Child centred approach
- Develop Overlapping Strategies and Perspectives
- Coordinated support

(Farrell, 2022., Movement Matters, 2023)



(Source:- Flintshire County Council , 2019)

Challenges and Issues

Disadvantages to working with multiple agencies:-

- ❖ Ineffective communication between agencies
- ❖ Information not being shared
- ❖ Mixed messages
- ❖ Lack of consistencies in the support structure
- ❖ Increases confusion complexities when dealing with agency approaches and Best Practice.
- ❖ Complexities in dealing with cultural differences through communication
- ❖ Increases the time required to collaborate with the multiple agencies,
- ❖ Coordinating numerous professionals

(Farrell, 2022)

Benefits

Benefits of working with multiple agencies:-

- ❖ Promotes sharing of expertise, professional knowledge, and resources for best practices.
- ❖ Build a cohesive approach through unifying multiple agency teams
- ❖ Provides continuity and joint planning
- ❖ Enhances and improves outcomes.
- ❖ To provide the best support for the child

(Meachon, 2023)



(Carmarthenshire Family Information Service, 2024)

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Presentation

Good Evening, my name is Linsey Smith and tonight I will be evaluating and analysing the effect that Dyspraxia has on a child's development.

During the academic year of 2022-23, 55 children were recorded in Wales as being affected with Dyspraxia (Welsh Government, 2023). Affecting 5-6% of school-aged children, it is a prevalent childhood disability which affects twice as many boys than girls (Harris *et al.*, 2015).

Talukdar (2015.p. 11) stating that Dyspraxia is present from birth and as the child develops, it becomes more apparent. Although the term Dyspraxia is used to describe the movement difficulties experienced by the child, these difficulties are not a result of muscular problems (BDA, 2024).

In comparison, children with Dyspraxia have a significant delay in coordination and have trouble in achieving the skills require to attain their 'motor milestones', in contrast to other children of a similar age (NHS, 2023). Movement Matters (2023) states that due to these coordination difficulties, an adverse effect can be made on a person's education, and everyday life activities.

Christmas, and Van de Weyer, (2020.p.3-4), explains, due to its complexity, children with Dyspraxia can experience difficulties in many aspects of their life and in unique combinations, and due to this, these individual's become a heterogenous group. Furthermore, as a result, due to the complexity and lack of consensus, regarding the description and definition of the disorder, health and education professionals in the UK and Internationally now use an umbrella term, of Developmental Coordination Disorder (DCD) instead of Dyspraxia for the purpose of diagnosis (Child Mind Institute, 2023).

Farmer *et al.*, (2016.p. 538-547) clarifies that DCD observed in children is a chronic neurological disorder, that impairs both gross and fine motor skill development. However, Peer and Reid (2021.p. 424) state that the coordination difficulties experienced with DCD do not relate to medical conditions such as Cerebral Palsy or Multiple Sclerosis (MS). Harris *et al* (2015.p.659-665) discloses further that doctors and paediatricians have previously unrecognized, or mis identified DCD.

Early signs of DCD can be witnessed from an early age, due to delays in achieving age-appropriate developmental milestones. Parents may observe this delay in their child's ability to roll over, sit, crawl, or walk, in addition to their child's unusual posture, and their ability to play with toys, such as blocks, that require good co-ordination (NHS, 2023).

Although difficulties vary for everyone, Doherty (2020) explains that when a child experience developmental delay in their Gross Motor Skills, they tend to demonstrate poor timing, balance, spatial and body awareness. This usually results in them tripping or by bumping into something or someone. Bremner *et al* (2012) discusses further that due to DCD, children can demonstrate awkward or clumsy behaviours. This manifests due to poor muscle tone and is more prominent when the child is using scissors or trying to pick up or hold simple objects, such as a pencil. Harrowell *et al* (2018) expands by stating that with whole body motor coordination difficulties, children have difficulty in defining left from right, combining, and remembering controlled movement sequencing, this can target their climbing, jumping, running, and walking abilities.

Blyth (2015), and Addy and Dixon (2013) explain that although DCD has a significant impact on a child's Gross Motor Skills, Fine Motor Skills are also problematic. These can include dressing, cleaning of teeth, and using a knife and fork. Discussing further the impact that DCD has on the child's academic achievements, due to coordination problems. Stating that children with DCD find difficulty with pencil and pen control, finding basic movement patterns including letter and number formation difficult (Hudson, 2023). However, Mencap (2023) disputes this fact, stating that DCD is not a Learning Disability, but a Learning Difficulty. Stating that when provided with an appropriate learning environment, these individuals can become successful. This is substantiated by Dyspraxia UK (2023) whereby reference is made to 'Exceptional Individuals' who have diagnosed DCD, these include Albert Einstein and Daniel Radcliff.

As practitioners, under Chapter 20. Part 16 and 17 of The Additional Learning Needs Code for Wales (2021) we have a duty of care to recognise a child's developmental markers. Practitioners are in a prime location, having the ability to collate evidence require for a professional diagnose through means of Developmental observations and milestone tracking as stated within the Additional Learning Needs and Education Tribunal (Wales) Act 2018.

An accurate diagnosis of DCC can be extremely difficult to diagnose, this can be due to different professional descriptions. Although, these difficulties arise, it is essential that individuals do receive a professional diagnosis and not that of a teacher, nurse, or other individuals (NHS,2023).

Within the UK, DCD is diagnosed through the processes of three observational screening processes. However, these can be somewhat problematic as each process has its own diagnosis criteria. These assessment processes are as follows, The Movement Assessment Battery for Children-2 (MABC-2) the Diagnosis and Statistical Manual of Mental Disorders (DSM-5) and the Diagnosis Criteria for Developmental Motor Co-ordination Disorder (ICD-11) Section 6A04 (APA, 2017., WHO, 2018).

For the purpose of this presentation, focus will be made on the MABC-2 assessment. The majority of professionals within the diagnosis process favour the use of this assessment process, due to its flexibility to be used within the home, school, and clinical environments, in addition to its effectiveness and simplicity for children to participate (Hageman & Magtibay, 2024).

Designed to assess a child's gross and fine motor skills in everyday activities, the MABC-2 assessment consists of both a checklist and a motor test. This assessment process enables three key motor skill aspects to be measures, these include balance, ball skills, and manual dexterity. Enabling an insight into the child's development in a vast array of environments (Kielczewski, 2013). The MABC assessment, targets children with potential deviations to their motor skills, between the ages of 3 to 16 years of age. Its design and purpose are to identify at an early stage, deficits in a child's motor development to enable therapeutic targeted and planned interventions (Meachon, 2023).

To complete a MABC-2 assessment, Occupational therapists, Paediatricians, or Physical therapists, follow a standardised assessment process, within a 20-40 minute session, however, some flexibility is permissible (Henderson and Barnett, 2024). Within this process of assessment, there are 3 subtest age groups, whereby each group has a separate age appropriate test battery. For the purpose of this evening, focus will be made of Subtest group 1, focusing on 3 to 6 years and 11 months. As discussed earlier, the MABC-2 assessment, focuses on an individual's balance, ball skills, and manual dexterity, within each group there are 3 levels of difficulty which increase with age.

Focusing on activities such as single-leg balance, catching, and tossing a beanbag, and bead threading (Kirby, 2021).

Providing professionals with a simple traffic light system of recording assessment outcomes, MABC's are able to derive a cumulative score for each motor developmental aspect. Due to this ease of use, Griffiths *et al.*, (2018) and Hadwin *et al.*, (2023) explains its concurrent and validity in comparison to alternative paediatric motor assessment, the MABC is extensively employed internationally. When combined with clinical history and physical examination, the MABC-2 assessment forms an essential part of the diagnosis of DCD (Brown *et al.*, 2020).

Lee and Zwicker (2021) stresses that it is important that DCD is identified early, this enables the child to receive the appropriate interventions, increase factors that positively influence a child's wellbeing and decrease negative risk factors impacting a child's life.

When DCD is identified early, it enable's practitioner's and professionals to identify the child or family's needs and educational support needed in line with the UNCRC and the UNCRPD rights of the child (United Nations, 2022., UNICEF UK, 2019). When provided with a statement of diagnosis, practitioners have the ability to follow strategies such as the Reggio Emilia and Montessori Approachs, where focus is on the unique child approach (Isaacs, 2015.,Thornton & Brunton, 2014). When distinguishing the uniqueness of the child identified with DCD, the NSPCC (2024) and Early Years Alliance (2023) explain that focus can be made on providing the child with a voice. Empowering the individual to express their wishes in addition to supporting their physical, educational, and emotional development and well-being (Dunford *et al.*, 2024., Farrell, 2021., Cousins and Cunnah, 2018)

Alonso Soriano *et al.*, (2015) and Klein *et al.*, (2024) explain that due to lack of consistency and confusion of the diagnostic process, long waiting times between referrals and access diagnostic services. Cause families seeking assistance for their children, unnecessary stress in accessing early intervention. Stating further, that due to the lack of knowledge about DCD amongst health and care provides, the pathway to diagnosis is inconsistent and ineffective.

However, when delayed or misdiagnosis occurs, the effects on the child can be detrimental. Not only does it limit opportunities to access targeted interventions, a child's development and behaviour can regress, resulting in social isolation, anxiety, stress, and self-esteem issues. In addition, children can learn to mask their developmental difficulties and overlapping learning difficulties, such as, ADHD, ASD, and Dyslexia can be missed (Spittle *et al.*, 2018., Holland *et al.*, 2018.p.329).

Boyes Turner, (2017) explains, that unfortunately sometimes parents can be the cause of a delay in diagnosis or responsible of a false diagnosis. This can be due to the fact that some parents will push for a false diagnosis for financial gain, attention or as a justification for their child's behaviour. Due to this drain on the diagnosis system, children who require a true diagnosis can be delayed. Additionally, some parents still consider a professional diagnosis or statement of diagnosis as an embarrassment, this may be due to the stigma associated with a disability or the attitudes of others (Armstrong *et al.*, 2017., Broomhead, 2019.p, 127).

By utilising a Multi-Agency Approach, it enables the child and family to access a child-centred support strategy (MacIntyre, 2015). In addition, it enables the child's neurodiversity to be accepted and acknowledged, accommodating the child's unique way of learning. Miller (2024) and Sewell (2022) stipulates that although children with DCD are understood to have learning differences, they do however possess strengths associated with neurodivergent thinking, such as problem solving skills and adaptation of the situation.

Working integral with a collaboration of professionals within a single team, enables a problem solving approach to be achieved, and as a result enabling and enhancing inclusive educational practice in accordance with Children Act (1989), and Equality Act (2010) (Estyn, 2022)

With the involvement of Occupational Health, Physiotherapists, Paediatricians, Educational settings, the family, and the child, it enables an individually unique tailored approach to be accomplished. Providing the ability to develop overlapping strategies and perspectives, in a coordinated support package (Carmarthenshire Family Information Service, 2024).

Co-ordinating numerous professionals, each with their own agency approaches and Best Practice procedures, can cause some complications, such as mixed messages and time restraints (Bacon and Rappold, 2012). Equally, when a lack of consistency is an additional factor, ineffective communication and missed information can also affect the efficiency and success of the child's intervention. Despite this, when professional boundaries are eliminated and a consensus view is established, a multi-agency approach offers and promotes shared professional knowledge, experience, resources, and best practices (Crutchley, 2018). This cohesive approach enables continuity and joint planning, to provide the best support possible for the child (Dewis Cymru, 2023).

To conclude, although diagnosis of DCD can be complicated and delayed, it is however, essential that children and families are supported throughout this process. By employing a multi-agency approach, children and their families have the ability to overcome challenges identified within the child's diagnosis. This continuity of support and joint planning, enables healthcare professionals and education settings to provide an individual child-centred approach to the child's learning and well-being. When appropriate adaptations are made, children with DCD are provided with an environment in which they can thrive and succeed.

Thank you for listening, is there any questions?

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