Research in Developmental Disabilities 32 (2011) 1351–1360

Contents lists available at ScienceDirect

Research in Developmental Disabilities

Emerging adulthood in developmental co-ordination disorder: Parent and young adult perspectives

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ARTICLE INFO

Article history:
Received 13 April 2010
Received in revised form 7 January 2011
Accepted 20 January 2011
Available online 18 February 2011

Keywords:
Emerging adulthood
Developmental coordination disorder
Parents
Dyspraxia

ABSTRACT

Recent research widely acknowledges that developmental co-ordination disorder (DCD) is a pervasive and enduring disorder, which persists into adolescence and adulthood (Cousins & Smyth, 2003; Kirby, Sugden, Beveridge, & Edwards, 2008). However, few studies have given detailed consideration to the range and level of functioning difficulties in emerging adults with DCD, and no studies to date have gained a parental perspective.

Current functioning of 19 young adults with DCD was examined using the Adult Dyspraxia/DCD Checklist (ADC, Kirby, Edwards, Sugden, & Rosenblum, 2010) and parents' views of their child's current functioning was also obtained. Results suggest that whilst some motor skills such as handwriting continue to impact in emerging adulthood, not all skills are as problematic, such as self-care skills. Additionally, executive functioning, and social skills seem to be a key areas of concern for both young adults and their parents. Results provide guidance for areas of intervention that need to be considered, especially focusing on executive functioning skills. Also they highlight the need for gathering information from more than one source to gain a complete picture of functioning.

1. Introduction

Developmental co-ordination disorder (DCD), also known as Dyspraxia in the UK, is a common developmental disorder affecting motor co-ordination. The most recent, formal and widely internationally used term to describe these children is DCD, which appears in both the Diagnostic and Statistical Manual of Mental Disorders (DSM) (American Psychological Association, APA, DSM-III-R, 1987; DSM-IV, 1994; DSM-IV-TR, 2000) and the International Classification of Diseases and Related Health Problems (WHO, ICD-10, 1993). DSM-IV (APA, 2000) recommends diagnosis of DCD for those who have (i) a level of motor/co-ordination below that expected for their chronological age, which (ii) impacts across a range of activities of daily living (e.g. dressing, self-care tasks) and school functioning (e.g. handwriting, playing team games), and (iii) is not caused by a medical condition (e.g. Cerebral Palsy, hemiplegia), or (iv) low intelligence. Data from the Avon Longitudinal Study of Parents and Children (ALSPAC) cite the UK prevalence at between 1.7% and 3.2% for children aged 7–8 years (Lingam, Hunt, Golding, Jongmans, & Emond, 2009).

DCD is well documented in childhood, but few studies have characterised the symptoms and signs of DCD in emerging adulthood, the period between 16 and 25 years. In particular there is less knowledge of what changes and what persists over time. Most research at this stage has considered the motor functioning of individuals and less focus has been placed on

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doi:10.1016/j.ridd.2011.01.041

other potential areas of functioning such as executive functioning (EF) skills, or how difficulties may limit social participation and academic or employment success (Cousins & Smyth, 2003; Losse et al., 1991). Knuckey and Gubbay (1983) examined a group of thirteen 16–20 year olds in what they called the 'clumsy group'. They found that these individuals were in less skilled jobs than matched controls, and that their choice of job was not related to intelligence. There was an acknowledgement that some, but not all, individuals had persisting difficulties in domains other than motor skills. Similarly, Losse et al. (1991) followed up 15 adolescents aged between 15 and 17 years, who were originally described as 'clumsy' during childhood. Nine of the 15 were noted to have 'poor concentration' and were 'easily distracted and forgetful', 7 of the 15 were noted to have 'personality and social problems and no friends', 6 of the 15 were shown to 'lack confidence' and 7 of the 15 were 'shy/timid'.

1.1. What is emerging adulthood?

Emerging adulthood, usually considered to be between 16 and 25 years, describes the important stage bridging adolescence and adulthood, where the individual is still dependent on their parents but at the same time is undergoing a period of identity exploration. Arrival at adulthood can be marked by a number of factors such as the ability to establish a relationship with parents as an equal adult with independent attitudes and values (Arnett, 1994, 1997; Hauser & Greene, 1991; Meeus, Maassen, & Engels, 2005). Emerging adults must also develop a consideration for others (Mayseless & Scharf, 2003) and be able to learn and comply with social norms (Arnett, 1994). Self esteem and confidence are important to move towards adulthood (Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2008). In childhood in DCD low self-esteem has been noted (Skinner & Piek, 2001), as well as, limited engagement in social activities with peers, which may result in less confidence (Poulsen, Ziviani, Cuskelly, & Smith, 2007; Shucksmith & Hendry, 1998). The effect of these factors may prolong the stage of emerging adulthood and result in greater parental support and guidance required for longer than peers.

Lack of socialisation in young adults with DCD has been recently described (Kirby, Sugden, Beveridge, & Edwards, 2008), and may have a secondary impact of increasing the risk of anxiety and depression (Schulenberg, Sameroff, & Cicchetti, 2004) in this group. This may be exacerbated by reduced family support at college or university and lead to increased loneliness, greater alienation, and lowered self-esteem (Sandstrom & Zakriski, 2004; Wiseman, Mayseless, & Sharabany, 2006).

Understanding the presentation of symptoms and signs in emerging adulthood in DCD is important not only for the young adult and their parents, but also for colleges, universities and workplaces in order to provide appropriate support (Kirby et al., 2008). Symptoms are likely to vary in adulthood as they do in childhood for several reasons (Visser, 2003), such as having different patterns of motor difficulties, with better fine or gross motor skills for example, or having an associated developmental disorder, such as attention deficit hyperactivity disorder (ADHD) or Dyslexia which, may negatively influence outcome (Kadesjö & Gilberg, 2001).

Some individuals may have improved skills as a result of intervention in childhood, alternatively, symptoms may appear to be reduced or changed, as the individual has learnt coping mechanisms or acquired some skills through prolonged practice. Adults can also choose an optimal environment for themselves and so can avoid situations that emphasise their difficulties such as using a keyboard to record information rather than hand writing. However, novel settings or circumstances such as a new workplace or employment role, or a reduction in parental or educational support may again highlight difficulties or present new challenges.

New settings often demand the individual to have higher levels of organisational skills. Studies in children with DCD have shown that in addition to motor difficulties, executive functioning skills, which includes working memory, response inhibition, and the ability to plan goal directed tasks may have an impact on children's ability to organise and complete academic tasks especially at speed (Piek, Dyck, Francis, & Conwell, 2007; Piek et al., 2004). Whilst recent studies have also begun to discuss the prominence of EF difficulties in student populations with DCD (Kirby et al., 2008; Kirby, Edwards, Sugden, & Rosenblum, 2010) the extent to which motor and EF difficulties continue to have an impact on these adults in emerging adulthood remains unclear. However, the impact of EF difficulties has been noted in adulthood, in other conditions such as ADHD and Autism (Barkley, 1997; Barkley, Edwards, Laneri, Fletcher, & Metevia, 2001; Sergeant, 2000; Verte, Geurts, Roeyers, Oosterlaan, & Sergeant, 2005) suggesting that this may be an area in need of further research.

Finally, gaining views from parents when assessing adults with DCD in order to gain a complete picture of functioning has been seen as valuable in other conditions such as ADHD (Barkley, Murphy, & Fischer, 2008) and may also offer additional important information to frame the support required.

1.2. Aims of the study

The current study has two aims. Firstly, to gain an understanding of the current functioning of young adults who were diagnosed with DCD in childhood and are now aged 17–25 years; and secondly, to consider how symptoms of DCD persist and resolve, and what new difficulties (if any) present at this time.

In order to gain a more complete picture of functioning, information was gathered from two view points, from the young adults themselves and from their parents. Gathering information from more than one source offers the potential to gain a more complete understanding of the lived experiences of those with DCD (Denzin, 1988). It has been noted that using multiple methods in this way may also highlight different perspectives (Robson, 2004). Using qualitative research methods