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Consequences of developmental coordination disorder on school performance, scholastic competence, and educational outcomes: A systematic review

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ADMINISTRATIVE INFORMATION**Support** - Waterloo Foundation.**Review Stage at time of this submission** - Data extraction.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202680095**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 August 2026 and was last updated on 26 August 2026.**INTRODUCTION**

Review question / Objective How does DCD affect school performance, scholastic competence, and educational outcomes at nursery/preschool, elementary school, secondary school, and post-secondary school?

Rationale As part of an update to international clinical practice recommendations, we are examining the consequences of developmental coordination disorder (DCD) across the lifespan. For this review, we are looking at school performance, scholastic competence, and educational outcomes from preschool to post-secondary education.

Condition being studied Developmental coordination disorder (DCD) is a neurodevelopmental condition that affects one's ability to learn and perform motor skills. There are four diagnostic criteria as per the DSM-5-TR (APA, 2022): (A) the acquisition and execution of coordinated motor skills are significantly below what is expected for the person's age and ability to

learn; (B) the motor deficit significantly and persistently interferes with daily activities, such as self-care, school, vocational and pre-vocational activities, leisure, and play; (C) onset is in the early developmental period; and (D) the motor difficulties are not better explained by an intellectual disability, visual impairment, or neurological/medical condition affecting movement.

METHODS

Search strategy Five databases have been searched: MEDLINE, EMBASE, CINAHL, PsycINFO, and Web of Science.

As an example, MEDLINE P terms include: Motor Skills Disorders/ or (developmental coordination disorder or motor skill* disorder* or dyspraxia or "specific developmental disorder of motor function" or "deficit* in attention motor control and* perception").ti,ab.

O terms include: Schools/ or Education/ or school or skill* acqui* or copy* or scribble* or print* or writ* or typing or keyboard* or education or academic*).ti,ab.

Participant or population Any age from infants/toddlers (0-2y) to Adults (19+y-64y) with: DCD/DCD risk; Dyspraxia; DAMP; specific developmental disorder of motor function; Participants need to meet at least two DCD diagnostic criteria to be included.

Intervention Not applicable.

Comparator Typically developing/neurotypical controls
With and without co-occurring conditions (e.g., ADHD, learning disorder), if applicable.

Study designs to be included Any study design.

Eligibility criteria

Exclusions: Adults aged 65+y; global development delay; moderate or severe intellectual disability; cerebral palsy or other conditions affecting movement; neurological conditions (e.g., stroke, MS, ALS, etc.); cxsda articles where children/youth is only defined by a motor test.

Information sources Electronic databases of peer-reviewed articles published from 1994 in any language will be included. Theses/dissertations, conference proceedings, books, and other grey literature will be excluded.

Main outcome(s) Academic outcomes: pre-writing, writing, handwriting, spelling, reading, mathematics.

Additional outcome(s) School participation and educational experiences
School achievement and educational attainment
Long-term educational outcomes.

Data management References were imported into Covidence. Two independent reviewers reviewed titles, abstract, and full-text articles. Data were extracted into Excel.

Quality assessment / Risk of bias analysis
Studies will be evaluated using JBI tools.

Strategy of data synthesis Only a systematic review is planned but a meta-analysis will be considered if data allow.

Subgroup analysis Data will be presented by relevant age groups (i.e., nursery/preschool, elementary school, secondary school, postsecondary) and by academic outcome (i.e., reading, spelling, writing, handwriting, math).

Sensitivity analysis Not planned.

Language restriction None.

Country(ies) involved Canada.

Keywords developmental coordination disorder, motor skills disorder, academic outcomes, educational achievement.

Dissemination plans The systematic review will be published in a peer-reviewed journal and will be summarized in international clinical practice recommendations. Results will be presented at relevant conferences. Lay summaries/infographics will be prepared and posted online and circulated through social media.

Contributions of each author

Author 1 - Catherine Purcell - Contributed to study selection, data extraction, and data analysis; will draft manuscript.

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