File S1

Database search strategies

Search strategies for the following databases: MEDLINE (Ovid), Scopus (Elsevier), ProQuest, CINAHL (EBSCO), and Web of Science.

File S1, Table S1: Search strategy for MEDLINE (Ovid), conducted November 2023.

Category	Query
Population	Child/ OR Child, Preschool/ OR child*.ti,ab,kf,kw. OR preschool*.ti,ab,kf,kw. OR preadolescen*.ti,ab,kf,kw.
	AND
Measurement	Biomechanical Phenomena/ OR Electromyography/ OR biomechanic*.ti,ab,kf,kw. OR kinematic*.ti,ab,kf,kw. OR ground reaction force.ti,ab,kf,kw. OR loading rate.ti,ab,kf,kw. OR plantar pressure.ti,ab,kf,kw. OR emg.ti,ab,kf,kw. OR spatiotemporal.ti,ab,kf,kw. OR motion capture.ti,ab,kf,kw. OR gait analysis.ti,ab,kf,kw. OR inertial.ti,ab,kf,kw.
	AND
Activity	Movement/ OR Gait/ OR Exercise/ OR movement.ti,ab,kf,kw. OR gait.ti,ab,kf,kw. OR sport*.ti,ab,kf,kw. OR walk*.ti,ab,kf,kw. OR run*.ti,ab,kf,kw. OR jump*.ti,ab,kf,kw.
	NOT
Exclusion	cerebral palsy.mp. OR dystrophy.mp. OR patient.mp. OR disorder.mp. OR injur*.mp.

File S1, Table S2: Search strategy for Scopus (Elsevier), conducted November 2023.

Category	Query
Population	TITLE-ABS-KEY (child* OR preschool* OR preadolescen*)
	AND
Measurement	TITLE-ABS-KEY (biomechanic* OR kinematic* OR "ground reaction force" OR "loading rate" OR "plantar pressure" OR emg OR spatiotemporal OR "motion capture" OR "gait analysis" OR inertial)
	AND
Activity	TITLE-ABS-KEY (movement OR gait OR sport* OR walk* OR run* OR jump*)
	AND NOT
Exclusion	TITLE-ABS-KEY ("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*)

File S1, Table S3: Search strategy for ProQuest, conducted November 2023.

Category	Query
Population	TITLE,ABSTRACT(child* OR preschool* OR preadolescen*)
	AND
Measurement	TITLE,ABSTRACT(biomechanic* OR kinematic* OR "ground reaction force" OR "loading rate" OR "plantar pressure" OR emg OR spatiotemporal OR "motion capture" OR "gait analysis" OR inertial)
	AND
Activity	TITLE,ABSTRACT(movement OR gait OR sport* OR walk* OR run* OR jump*)
	NOT
Exclusion	TITLE,ABSTRACT("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*)

File S1, Table S4: Search strategy for CINAHL (EBSCO), conducted November 2023.

Category	Query
Population	((MH "Child") OR (MH "Child, Preschool")) OR TI ((child* OR preschool* OR preadolescen*)) OR AB ((child* OR preschool* OR preadolescen*)) NOT TI (("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*)) NOT AB (("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*))
	AND
Measurement	((MH "Electromyography") OR (MH "Biomechanics") OR (MH "Motion Capture") OR (MH "Ground Reaction Force")) OR TI ((biomechanic* OR kinematic* OR "ground reaction force" OR "loading rate" OR "plantar pressure" OR emg OR spatiotemporal OR "motion capture" OR "gait analysis" OR inertial)) OR AB ((biomechanic* OR kinematic* OR "ground reaction force" OR "loading rate" OR "plantar pressure" OR emg OR spatiotemporal OR "motion capture" OR "gait analysis" OR inertial)) NOT TI (("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*)) NOT AB (("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*))
	AND
Activity	((MH "Movement") OR (MH "Gait") OR (MH "Exercise")) OR TI ((movement OR gait OR sport* OR walk* OR run* OR jump*)) OR AB ((movement OR gait OR sport* OR walk* OR run* OR jump*)) NOT TI (("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*)) NOT AB (("cerebral palsy" OR dystrophy OR patient OR disorder OR injur*))

File S1, Table S5: Search strategy for Web of Science, conducted November 2023.

Category	Query
Population	(((TS=(child* OR preschool* OR preadolescen*))
	AND
Measurement	TS=(biomechanic* OR kinematic* OR “ground reaction force” OR “loading rate” OR “plantar pressure” OR emg OR spatiotemporal OR “motion capture” OR “gait analysis” OR inertial))
	AND
Activity	TS=(movement OR gait OR sport* OR walk* OR run* OR jump*))
	NOT
Exclusion	TS=(“cerebral palsy” OR dystrophy OR patient OR disorder OR injur*)

Data extraction tool

File S1, Table S6. Sample of fields in the data extraction tool, following PCC structure.

Category	Field
Study	Author, Year of publication, Title, Journal name, Keywords, Funding source
Population	Dependent factor / assigned grouping, Number of participants, Ages, Sex, Presence of adult participants, Weight status, Training status
Concept	Biomechanical outcome, Measurement device, Movements assessed, Footwear worn, Data type (discrete/continuous), Study type
Context	Country of Origin, Data collection setting