Supplementary Table A.1 PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	4–5
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	4–5
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (eg, Web address), and, if available, provide registration information including registration number.	https://www.crd.york.ac.uk/PROSPERO CRD42020172568
Eligibility criteria	6	Specify study characteristics (eg, PICOS, length of follow-up) and report characteristics (eg, years considered, language, publication status) used as criteria for eligibility, giving rationale.	6, Supplemental Method
Information sources	7	Describe all information sources (eg, databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	6
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	6–7
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	7
Data collection process	10	Describe method of data extraction from reports (eg, piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	8
Data items	11	List and define all variables for which data were sought (eg, PICOS, funding sources) and any assumptions and simplifications made.	8
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	QUIPS, Supplemental Table 3
Summary measures	13	State the principal summary measures (eg, risk ratio, difference in means).	6

Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (eg, I^2) for each meta-analysis.	8

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (eg, publication bias, selective reporting within studies).	8, Supplemental Table 3
Additional analyses	16	Describe methods of additional analyses (eg, sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	-
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	8
Study characteristics	18	For each study, present characteristics for which data were extracted (eg, study size, PICOS, follow-up period) and provide the citations.	8–15, Table 1
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	QUIPS, Supplemental Table 3, Table 1
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	8–15
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Table 1
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Table 1
Additional analysis	23	Give results of additional analyses, if done (eg, sensitivity or subgroup analyses, meta-regression [see Item 16]).	-
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (eg, healthcare providers, users, and policy makers).	15–19
Limitations	25	Discuss limitations at study and outcome level (eg, risk of bias), and at review-level (eg, incomplete retrieval of identified research, reporting bias).	19
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	19–20
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (eg, supply of data), role of funders for the systematic review.	21

Supplemental Table 2 saMOOSE Checklist

MOOSE Checklist		**Reported on page #**
Title	Identify the study as a meta-analysis (or systematic review)	**1**
Abstract	Use the journal's structured format	**3**
Introduction	**Present** The clinical problem	**4–5**
	The hypothesis	**4–5**
	A statement of objectives that includes the study population, the condition of interest, the exposure or intervention, and the outcome(s) considered	**5**
Sources	**Describe** Qualifications of searchers (e.g. librarians and investigators)	**Title page**
	Search strategy, including time period included in the synthesis and keywords	**6–7**
	Effort to include all available studies, including contact with authors	**6–7**
	Databases and registries searched	**6**
	Search software used, name and version, including special features used (e.g. explosion)	**6–7**
	Use of hand searching (e.g. reference lists of obtained articles)	**6–7**
	List of citations located and those excluded, including justification	**-**
	Method of addressing articles published in languages other than English	**Not relevant**
	Method of handling abstracts and unpublished studies	**-**
	Description of any contact with authors	**-**

Supplemental Table 2 saMOOSE Checklist

Study Selection	**Describe** Types of study designs considered	**6–7**
	Relevance or appropriateness of studies gathered for assessing the hypothesis to be tested	**6–7, Table A.3, Supplementary methods**
	Rationale for the selection and coding of data (e.g. sound clinical principles or convenience)	**6–7, Table A.3, Supplementary methods**
	Documentation of how data were classified and coded (e.g. multiple raters, blinding and interrater reliability)	**6–7**
	Assessment of confounding (e.g. comparability of cases and controls in studies where appropriate)	**7**
	Assessment of study quality, including blinding of quality assessors; stratification or regression on possible predictors of study results Assessment of heterogeneity	**Table A.3**
	Statistical methods (e.g. complete description of fixed or random effects models, justification of whether the chosen models account for predictors of study results, dose-response models, or cumulative meta-analysis) in sufficient detail to be replicated)	**Not relevant**
Results	**Present** A graph summarizing individual study estimates and the overall estimate	**Not relevant**
	A table giving descriptive information for each included study	**Table 1**
	Results of sensitivity testing (e.g., subgroup analysis)	**Not relevant**
	Indication of statistical uncertainty of findings	**Not relevant**
Discussion	**Discussion** Strengths and weaknesses	**15–19**
	Potential biases in the review process (e.g, publication bias)	**17–19**
	Justification for exclusion (eg, exclusion of non–English-language citations)	**17–19**
	Assessment of quality of included studies	**17–19, Table A.3**
	Consideration of alternative explanations for observed results	**17–19**
	Generalization of the conclusions (ie, appropriate for the data presented and within the domain of the literature review)	**19–20**
	Guidelines for future research	**19–20**
	Disclosure of funding source	**21**

Supplemental Table 3 Quality in Prognosis Studies evaluation

Study	Participation	Attrition	Prognostic factor measurement	Outcome measurement	Confusion factors	Statistical analysis	Overall risk of bias
Attention-deficit/hyperactivity disorder							
Gilbert, 2011	Low	Moderate	Low	Moderate	High	Low	Moderate
Dickstein, 2005	Moderate	Moderate	Moderate	Low	High	Low	High
Mahone, 2006	Low	Low	Low	Low	Moderate	Low	Low
Mostfsky, 2005	Moderate	Moderate	Low	Low	High	Moderate	High
O'Brien, 2010	Low	Low	Low	Low	High	Low	Moderate
Klotz, 2012	Moderate	Low	Low	Low	High	Low	Moderate
Gilbert, 2019	Low	Low	Low	Low	Moderate	Low	Low
Pan, 2017	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
Narad, 2013	Moderate	Low	Low	Low	High	Low	Moderate
Classen, 2013	Moderate	Low	Low	Low	Low	Low	Low
Barkley, 2008	Moderate	Low	Low	Low	Moderate	Low	Low
Weafer, 2008	Moderate	Moderate	Moderate	Moderate	High	Moderate	High
Leitner, 2007	Moderate	Low	Low	Moderate	Moderate	Moderate	Moderate

Aase, 2006	Low	Low	Low	Low	Moderate	Moderate	Moderate
Vickers, 2002	High	Low	Low	Low	Low	Low	Moderate
Rubia 1999	Moderate	Low	Moderate	Moderate	High	Low	High
Slaats, 2005	Low	Low	Low	Low	Moderate	Low	Low
Tantillo, 2002	Moderate	Low	Low	Low	Low	Low	Low
Tucha, 2004	High	Low	Low	Moderate	Moderate	Low	Moderate
Ben-Pazi, 2006	Low	Low	Low	Moderate	Low	Low	Low
Buderath, 2009	Moderate	Low	Low	Moderate	Moderate	Low	Moderate
Leitner, 2007	High	Low	Low	Moderate	Moderate	Low	Moderate
Dyck, 2014	Low	Low	Low	Moderate	Moderate	Low	Low
Rosenblum, 2008	High	Moderate	Low	Moderate	Moderate	Moderate	High
Kalff, 2003	Moderate	Moderate	Moderate	Moderate	High	Low	High
Colvin, 2003	Moderate	Low	Low	Low	Moderate	Low	Moderate
Lavasani, 2011	Moderate	Low	Low	Moderate	Moderate	Low	Moderate
Rubia, 2003	High	Low	Low	Moderate	Low	Moderate	Moderate
Harvey, 2007	Moderate	Low	Low	Low	Moderate	Moderate	Moderate

White, 2005	Moderate	Moderate	Moderate	Moderate	Low	Moderate	High
Imhof, 2004	Low	Low	Moderate	Low	Low	Low	Low
Schoemaker, 2005	Moderate	Low	Low	Moderate	Low	Low	Moderate
Li-Tsang, 2018	Low	Low	Moderate	Moderate	Moderate	Low	Moderate
Autism spectrum disorders							
Borremans, 2010	Moderate	Low	Low	Moderate	Moderate	Low	Moderate
Rosales, 2018	High	Low	Low	Moderate	High	Moderate	High
Patrick, 2018	Low	Low	Low	Moderate	Low	Low	Low
Brooks, 2016	Moderate	Low	Low	Moderate	Low	Low	Moderate
Classen, 2013	Moderate	Low	Low	Low	Low	Low	Low
Fuentes, 2009	Moderate	Low	Low	Low	Moderate	Low	Moderate
Fuentes, 2010	Moderate	Low	Low	Low	Moderate	Low	Moderate
Glazebrook, 2009	Moderate	Low	Low	Moderate	High	Low	High
David, 2009	Low	Low	Low	Moderate	Moderate	Low	Moderate
Esposito, 2008	Moderate	Low	Low	Moderate	Moderate	Moderate	Moderate

de Moraes 2019	High	Low	Low	Moderate	Moderate	Moderate	Moderate

Supplemental methods

Keywords and medical subject headings (MeSH) terms used for attention-deficit/hyperactivity disorder

("attention deficit hyperactivity disorder"[TIAB] OR "ADHD"[TIAB] OR "attention deficit disorder"[TIAB] OR "ADD"[TIAB] OR "attention deficit disorder with hyperactivity"[Mesh]) AND ("sports"[TIAB] OR "physical performance"[TIAB] OR "motor function"[TIAB] OR "Musculoskeletal Physiological Phenomena"[Mesh] OR "Sports"[Mesh] OR “motor skills”[TIAB]) AND ("Observational Study"[pt] OR "Comparative Study"[pt] OR "Case Reports"[pt] OR "Classical Article"[pt] OR "Clinical Study"[pt] OR "Observational Study, Veterinary"[pt] OR "Personal Narrative"[pt] OR "Observational Study"[TIAB] OR "Comparative Study"[TIAB] OR "case control study"[TIAB] OR "case-control study"[All Fields]) AND ("1970/01/01"[PDAT] : "2019/12/31"[PDAT])

Keywords and medical subject headings (MeSH) terms used for autism spectrum disorder(“autism spectrum disorder"[TIAB] OR "ASD"[TIAB] OR "Asperger Syndrome"[TIAB] OR "Autistic Disorder"[TIAB]) AND (“sports"[TIAB] OR "physical performance"[TIAB] OR "motor function"[TIAB] OR "Musculoskeletal Physiological Phenomena"[Mesh] OR "Sports"[Mesh] OR “motor skills”[TIAB]) AND ("Observational Study"[pt] OR "Comparative Study"[pt] OR "Case Reports"[pt] OR "Classical Article"[pt] OR "Clinical Study"[pt] OR "Observational Study, Veterinary"[pt] OR "Personal Narrative"[pt] OR "Observational Study"[TIAB] OR "Comparative Study"[TIAB] OR "case control study"[TIAB] OR "case-control study"[All Fields]) AND ("1970/01/01"[PDAT] : "2019/12/31"[PDAT])

Supplemental materials

Supplementary Table 1 Preferred reporting items for systematic review and meta-analysis 2009 Checklist

Supplementary Table 2 Meta-analyses Of Observational Studies in Epidemiology Checklist

Supplementary Table 3 Quality in Prognosis Studies evaluation

Supplemental methods: Supplemental methods