

INPLASY202530105
doi: 10.37766/inplasy2025.3.0105
Received: 24 March 2025
Published: 24 March 2025

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**Effects of Physical Activity, Exercise and Sport on
Executive Function in Adults with Attention Deficit
Hyperactivity Disorder: A Systematic Review**

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ADMINISTRATIVE INFORMATION

Support - Without financing.
Review Stage at time of this submission - Preliminary searches.
Conflicts of interest - None declared.

INPLASY registration number: INPLASY202530105
Amendments - This protocol was registered with the International
Platform of Registered Systematic Review and Meta-Analysis Protocols
(INPLASY) on 24 March 2025 and was last updated on 24 March 2025.

INTRODUCTION

Review question / Objective To describe and analyze the effects of physical activity, exercise, or sports on executive functions in adults diagnosed with ADHD.

Rationale Executive functions play a vital role in people's daily lives. And these functions are affected by ADHD. Exercise could be an additional or complementary treatment to those already known.

Condition being studied ADHD.

METHODS

Search strategy "Adult" OR "Adults" AND "Attention-Deficit/Hyperactivity Disorder" OR "Attention-Deficit with Hyperactivity Disorder" AND "Physical activity" OR "Exercise" OR "Sports" OR "Sport" AND "Executive Function".

Participant or population Adults.

Intervention Physical activity, exercise, or sports.

Comparator Adults with and without ADHD.

Study designs to be included Randomized controlled trials (RCTs) or quasi-experimental clinical trials that used physical activity, physical exercise, or sport as an intervention.

Eligibility criteria The inclusion criteria were as follows: (i) randomized controlled trials (RCTs) or quasi-experimental clinical trials that used physical activity, exercise, or sport as an intervention; (ii) the objective of improving some component of executive functions in adults with ADHD; and (iii) individuals of both sexes and adults aged 18 years or older. In addition, studies were incorporated into the systematic review using the PICO framework (population: adults with ADHD; intervention: physical activity, exercise, or sport; comparator: control group; outcomes: some improvement in executive functions).

The exclusion criteria were: (i) cross-sectional, retrospective, or prospective studies, studies with an intervention not focused on physical activity, exercise, or sport; (ii) studies with a co-intervention, such as medications, nutritional supplements, or an educational program; (iii) non-original articles (e.g., translations, book reviews, letters to the editor); (iv) duplicate articles; (v) review articles (e.g., narrative reviews, systematic reviews, meta-analyses); and (vi) case studies.

Information sources PubMed, Web of Science and Scopus.

Main outcome(s) An improvement in executive functions from physical activity, exercise or sport interventions.

Quality assessment / Risk of bias analysis Scale TESTEX.

Strategy of data synthesis Template for intervention description and replication (TIDieR) checklist and guideScale TIDier.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable (without meta-analysis).

Language restriction None.

Country(ies) involved Chile.

Keywords ADHD; Adults; Physical activity; Exercise; sports.

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