INPLASY

Rethinking Giftedness: A Systematic Review of Research on Identification, Assessment, and Inclusion in Gifted Education

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ADMINISTRATIVE INFORMATION

INTRODUCTION

Review question / Objective Synthesise recent research findings, identifying trends, gaps, and effective practices in the contemporary gifted education landscape.

Rationale Given the diversity of perspectives, methodologies, and outcomes reported in the literature, conducting a systematic review is essential to consolidate, compare, and critically examine empirical evidence on gifted and talented students and the educational programs designed to support them. A systematic synthesis allows for the identification of converging theoretical directions, methodological innovations, and persistent gaps that may limit the field's progression toward more equitable and developmentally responsive models of gifted education.

Condition being studied Identification, Assessment, and Inclusion in Gifted Education.

METHODS

Search strategy A literature search was conducted in two major bibliographic databases, the Web of Science (WOS) and SCOPUS, on 31 October 2025. The search strategy was designed to identify literature related to the Operation Houndstooth theory of co-cognitive development, as well as broader constructs associated with positive youth development, giftedness, and physical activity.

The WOS query used the following Boolean string: TS=("Operation Houndstooth") OR AB=("Co-Cognitive Factor Scale") AND TS=(YOUTH) AND TS=("Physical Activity") AND (TS=("Positive Youth Development") OR TS=(Talented) OR TS=("Gifted And Talented")) NOT TS=("Student Youth") AND

DT=(Article) AND PY=(2015–2025) AND LA=(English).

This formulation ensured both conceptual depth and terminological breadth. A semantically equivalent query was applied in SCOPUS to maintain consistency across databases. Search filters restricted results to journal articles published in English between 2015 and 2025.

The search yielded 255 records from WOS (exported in savedrecs.xls) and 187 records from SCOPUS (exported in a supplementary spreadsheet). Duplicate entries were identified and removed using Excel functions and manual inspection. The resulting dataset of unique articles formed the basis for screening and eligibility assessment.

Participant or population Gifted Education - Youths and Children.

Intervention None.

Comparator No intervention.

Study designs to be included Cross-sectional surveys, latent class analyses, quasi-experiments, instrument validation studies, and qualitative case studies.

Eligibility criteria (i) Were empirical peer-reviewed journal articles published between 2015 and 2025; (ii) Were written in English; (iii) Focused explicitly on gifted or talented youth populations, or on programmes designed for such populations (including those aligned with the Operation Houndstooth model or its co-cognitive factors); (iv) Examined cognitive, motivational, social-emotional, physical, identity-related or educational outcomes of G&T students, or explored the perceptions of educators, parents or administrators working with G&T populations; (v) Included children or adolescents, or adults in educational roles directly linked to youth giftedness.

Information sources Web of Science (WOS) and SCOPUS.

Main outcome(s) The studies highlight that gifted students display advanced cognitive abilities, metacognitive awareness, and emotional intelligence, supporting theories of multi-domain giftedness. However, significant gaps persist in teacher training, equitable access, and socio-emotional provision within gifted education programs. Many educators report inadequate preparation for identifying and nurturing gifted learners, particularly those from underrepresented

or disadvantaged backgrounds. Moreover, standardized curricula often constrain creativity and higher-order thinking, contributing to disengagement among gifted youth.

Additional outcome(s) The review emphasizes the need for culturally responsive assessment practices, inclusive policies, and sustained professional development to foster equity and excellence in G&T education. By integrating psychometric precision with contextual understanding, future research and policy can promote a holistic and globally relevant framework for identifying and supporting gifted learners.

Data management In cases where the full-text article was retrieved, but the study lacked methodological rigour or failed to address outcomes relevant to the research questions, exclusion was applied. After applying these criteria, a total of 45 articles were retained for final analysis.

Quality assessment / Risk of bias analysis To ensure methodological transparency and rigour, all included studies were subjected to quality appraisal using the Mixed Methods Appraisal Tool (MMAT, 2018 version). This instrument allows for differentiated evaluation across qualitative, quantitative (descriptive, non-randomised), and mixed-methods designs, and is widely regarded for its flexibility and consistency across heterogeneous datasets.

Each study was independently evaluated by two reviewers, based on five domain-specific criteria: (1) clarity of research questions; (2) appropriateness of sampling strategy; (3) validity and reliability of measurement instruments; (4) control of bias in data collection and reporting; and (5) internal coherence of results and interpretations.

Discrepancies in scoring were resolved through deliberation and, where necessary, third-party arbitration. Most quantitative studies demonstrated adequate sample sizes, robust statistical analyses, and validated instruments. However, several qualitative studies were penalised for lacking transparency regarding researcher reflexivity or data analysis procedures. Notably, MMAT scores were not used to exclude studies, but rather to inform the critical appraisal and interpretation of the aggregated evidence base.

For interpretive clarity, MMAT scores were converted into categorical quality levels, where values equal to or above 0.8 were considered high quality, indicating strong methodological rigor, validated instruments, and consistent reporting; scores between 0.6 and 0.79 were classified as

moderate quality, reflecting generally sound designs with minor methodological or reporting limitations; and scores below 0.6 were deemed low quality, indicating notable weaknesses such as small sample sizes, limited transparency, or insufficient control of bias.

Strategy of data synthesis A standardised data extraction protocol was developed and pilot-tested on a random sample of five studies to ensure clarity and consistency. The extraction form captured both descriptive and analytic data, including: (i) Author(s), year of publication, and country; (ii) Study type and methodological design; (iii) Objectives and hypotheses; (iv) Sample size and characteristics (e.g., age range, gender, identification criteria for giftedness); (v) Data collection methods and instruments used; (vi) Primary variables and measured outcomes; (vii) Key findings and statistical or thematic results; (viii) Practical implications, limitations, and authors' conclusions; (ix) MMAT quality score.

Subgroup analysis Analysis were made on first author and publication year, study design and methodological type, research purpose, and country of origin. Additionally, methodological and empirical characteristics of the studies included in the systematic review, detailing sample composition, instruments and measures used, psychometric properties, item formats, principal findings, and reported practical applications.

Sensitivity analysis Two reviewers independently extracted all data, followed by cross-checking and reconciliation of discrepancies. All extracted data were compiled into a centralised master spreadsheet, from which summary tables were generated. The final synthesis grouped studies according to both methodological approach (e.g., qualitative, quantitative, mixed) and thematic domain (e.g., cognitive functioning, creativity, emotional intelligence, physical activity, identity development, educational policy).

Language restriction English.

Country(ies) involved Portugal and Spain.

Keywords gifted; education; identification; learning; inclusion.

Dissemination plans Journal Article.

Contributions of each author
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