PUBLISHING INSTITUTE
Journal Website
Article history:
Received 15 March 2026
Revised 08 October 2026
Accepted 13 October 2026
Published online 01 December 2025

Psychological Research in Individuals with Exceptional Needs

OPEN PEER-REVIEW REPORT

E-ISSN: 3060-6713

Predicting Adaptive School Functioning in Students with ADHD Through Explainable Boosting Machines: The Roles of Cognitive Flexibility, Self-Regulation, and Teacher–Student Relationship Quality

Hannah. Wilcox[1], Anna. Nikolaidis[2*]

[1] Department of Clinical Psychology, Monash University, Melbourne, Australia
[2] Department of General Psychology, University of Patras, Patras, Greece

*** Corresponding author email address**: Farhad.tyam71@gmail.com

Editor	Reviewers
Shahrooz Nemati Professor, Department of Educational Sciences, Faculty of Educational Science and Psychology, University of Tabriz, Iran Sh.Nemati@Tabrizu.ac.ir	**Reviewer 1:** Azade Abooei Department of Counseling, Faculty of Humanities, University of Science and Art, Yazd, Iran. Email: a.abooei@tea.sau.ac.ir **Reviewer 2:** Mohsen Kachooei Assistant Professor of Health Psychology, Department of Psychology, Humanities Faculty, University of Science and Culture, Tehran, Iran. kachooei.m@usc.ac.ir

1. Round 1

1.1. Reviewer 1

Reviewer:

The paragraph stating “Among the factors associated with adaptive school functioning, executive functions have emerged as particularly influential” discusses executive functioning broadly, yet the study later focuses only on cognitive flexibility. The authors should provide a stronger theoretical rationale explaining why cognitive flexibility was selected over other executive functions such as working memory, inhibitory control, or planning, particularly given their established relevance in ADHD populations.

In the paragraph beginning “One executive function that has received increasing attention in recent years is cognitive flexibility,” the authors cite evidence supporting the importance of cognitive flexibility but do not sufficiently distinguish between cognitive flexibility as a neurocognitive process and as a self-reported psychological disposition. Since the Cognitive Flexibility Inventory is a self-report measure, the manuscript should discuss this distinction and acknowledge possible limitations associated with self-perceived executive functioning.

The participant description reports that "A total of 428 students with a documented clinical diagnosis of ADHD participated in the study." The manuscript should clarify how diagnostic documentation was verified, whether diagnostic assessments were recent, and whether symptom severity, comorbid conditions, or treatment histories were considered during participant screening. These factors may substantially influence adaptive school functioning.

The paragraph describing the Adaptive School Functioning Scale states that it possesses strong psychometric properties but does not provide citations, reliability coefficients, or evidence of validation within Greek populations. The authors should report Cronbach's alpha or omega coefficients for the present sample and provide empirical evidence supporting the scale's cultural applicability.

Regarding the Cognitive Flexibility Inventory, the manuscript notes that the scale includes the subdimensions of Alternatives and Control. However, the analysis appears to use only a total score. The authors should justify the decision not to examine subscale-level contributions, as distinct dimensions of cognitive flexibility may have different relationships with adaptive school functioning.

Authors revised the manuscript and uploaded the document.

1.2. Reviewer 2

Reviewer:

The paragraph introducing self-regulation states that "Self-regulation is widely regarded as a foundational competency for successful school adjustment." While the literature review is comprehensive, the authors should better articulate the conceptual overlap between self-regulation and adaptive school functioning. Because both constructs involve behavioral management and academic engagement, concerns regarding construct redundancy and criterion contamination should be addressed.

The discussion of teacher–student relationship quality emphasizes its developmental significance; however, the manuscript does not explain whether relationship quality was measured by a single classroom teacher or multiple teachers. Given that students often interact with several teachers in lower secondary education, the authors should clarify the assessment procedure and discuss potential measurement variability across educational levels.

In the paragraph beginning "Although cognitive flexibility, self-regulation, and teacher–student relationship quality have each been independently associated with positive educational outcomes," the authors argue that traditional statistical techniques fail to capture complex relationships. This assertion would be strengthened by explicitly reviewing prior ADHD studies that have attempted nonlinear modeling and explaining how the present EBM approach provides a methodological advancement over those studies.

The final paragraph of the Introduction states that "the study acknowledges the multidimensional nature of adaptive school functioning." However, no specific hypotheses are presented. The manuscript would be strengthened by including explicit directional hypotheses regarding predictor importance, expected nonlinear effects, and anticipated interactions among cognitive flexibility, self-regulation, and teacher–student relationship quality.

In the Methods section, the sentence "The research was conducted in Greece during the 2024–2025 academic year and involved students enrolled in public primary and lower secondary schools across the regions of Attica, Central Macedonia, and Thessaly" lacks sufficient sampling detail. The authors should specify the number of participating schools, recruitment rates, refusal rates, and whether cluster effects at the school level were considered during analysis.

Authors revised the manuscript and uploaded the document.

2. Revised

Editor's decision: Accepted.
Editor in Chief's decision: Accepted.

E-ISSN: 3060-6713