

Comparison of the Effectiveness of Infinite Tomatis Sound Therapy, Vestibulo-Cerebellar Skills Training, and the Combination of Both Methods on Response Inhibition in Students with Specific Learning Disorder with Reading Impairment

Somayeh. Abedi¹, Hasan. Ashayeri^{2*}, Mahnaz. Esteki³, Mahdieh. Salehi³


¹ Ph.D. student, Department of Psychology, CT.c, Islamic Azad University, Tehran, Iran

² Full Professor, Department of Neurology and Psychiatry, Iran University of Medical Sciences, Tehran, Iran



³ Assistant Professor, Department of Psychology, CT.c, Islamic Azad University, Tehran, Iran

* Corresponding author email address: ashayeri.has@iums.ac.ir

Editor

Asoke Kumar Saha
Professor Department of
Psychology, Jagannath University,
Dhaka, Bangladesh
drasoke@psychology.jnu.ac.bd

Reviewers

Reviewer 1: Seyed Ali Darbani
Assistant Professor, Department of Psychology and Counseling, South Tehran
Branch, Islamic Azad University, Tehran, Iran.
Email: Ali.darbani@iau.ac.ir
Reviewer 2: Mohammad Hassan Ghanifar
Assistant Professor, Department of Psychology, Birjand Branch, Islamic Azad
University, Birjand, Iran. Email: ghanifar@iaubir.ac.ir

1. Round 1

1.1. Reviewer 1

Reviewer:

The paragraph beginning “Neurocognitive research has identified multiple domains implicated in the etiology of dyslexia...” is rich in background detail but could benefit from a clearer transition explaining why response inhibition was chosen as the dependent variable rather than general executive functions.

The authors note “In multilingual and non-Western contexts, such as Iran and Indonesia, children with reading disorders often face additional linguistic and pedagogical barriers...”—this is valuable but needs empirical support or data (e.g., prevalence rates or local diagnostic challenges) to strengthen contextual grounding.

The final sentence clearly states the aim but would be stronger if framed as a hypothesis or directional expectation (e.g., “It was hypothesized that the combined intervention would yield superior improvement in response inhibition compared to single-modality and control groups”).

The paragraph “In the broader context of educational neuroscience...” could further specify how this study extends or challenges existing models (e.g., multisensory integration theory or cerebellar deficit hypothesis) rather than only aligning with them.

Authors revised the manuscript and uploaded the document.

1.2. Reviewer 2

Reviewer:

The statement “Empirical evidence supports the efficacy of Tomatis sound therapy in promoting executive functions and language-related skills” is strong, but the discussion could better integrate contradictory findings or limitations from other auditory therapies to strengthen balance and critical analysis.

The paragraph beginning “Moreover, research on executive functions—the umbrella term encompassing inhibitory control...” could explicitly connect theoretical underpinnings of inhibition (e.g., Barkley’s model of executive control) to the rationale for choosing response inhibition as the main outcome.

The authors report partial eta squared values (0.93 and 0.85) as extremely large. Clarify if these reflect within-subject effects across repeated measures, and interpret practically—do such large effects suggest potential overfitting or small sample inflation?

The statement “The Tomatis method enhances neural efficiency through auditory–cortical modulation...” is speculative. Consider referencing neuroimaging studies that demonstrate cortical activation changes after Tomatis training to substantiate mechanistic claims.

When stating “The greatest improvement in response inhibition was observed in the combined training group...”, the discussion could quantify the magnitude of improvement relative to baseline or control (e.g., effect size or mean change) for a clearer interpretation of practical significance.

Authors revised the manuscript and uploaded the document.

2. Revised

Editor’s decision: Accepted.

Editor in Chief’s decision: Accepted.