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PROGETTO 1/ PROJECT 1

Supervisore/Supervisor: Valentina Tobia

Titolo/Title: Time Processing Impairments in Children with Developmental Disorders: A Cross-Population Approach

Corso /PhD Course Scienze Cognitive e Comportamentali/Cognitive and Behavioral Sciences

Curriculum:


Link alla pagina personale OSR/UNISR/ <https://www.unisr.it/docenti/t/tobia-valentina>
Link to OSR/UniSR personal page:

Descrizione del progetto/Project description (Tra i 2.000 e 3.000 caratteri spazi inclusi/ Number of characters, including spaces: 2.000 - 3.000):

The capability of processing time is a fundamental function in human beings and a deficit in time processing can potentially affect everyday life (Grondin, 2010). Increasing evidence supports the existence of time-related impairments in school-aged children with developmental disorders such as Attention Deficit Hyperactivity Disorder (ADHD; Ptacek et al., 2019) and Specific Learning Disorders affecting mathematical ability (i.e., dyscalculia; Skagerlund & Träff, 2014, 2016). Most of the past studies identified time-related difficulties comparing the profile of these children with that of typically developing (TD) peers. However, as suggested by D'Souza et al. (2016), going beyond unique TD comparisons, cross-population studies, including different atypical populations, could be more useful for understanding the profile of a population with atypical development by identifying similarities and differences across disorders. The present project is aimed at pursuing this suggestion by comparing the time-related profiles of school-aged children with ADHD, dyscalculia, and TD.

Hypothesis. A deficit in time processing is expected in both the clinical samples compared to TD peers. However, a different pattern of difficulties is expected, with children with dyscalculia showing difficulties particularly with longer time intervals (seconds, e.g., Cester et al., 2017) and children with ADHD failing in discriminating intervals at both seconds and milliseconds levels (e.g., Himpel et al., 2009). Finally, the profile of skills related to the use of time in everyday life (e.g., time management) will be exploratively investigated.

Study design. A multi-informant and multi-method design will be implemented: experimental tasks will be used (time reproduction and discrimination, Tobia et al., 2018; temporal bisection tasks, Droit-Volet et al., 2013), as well as standardized neuropsychological tests (e.g., battery for Developmental Dyscalculia-BDE-2;

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Biancardi et al., 2016), and questionnaires administered to children, parents, and teachers for identifying indicators of ADHD (Marzocchi et al., 2021) and for investigating children’s sense of time (Porcelli et al., 2018). Children aged 8–13 will be involved in this study; the sample will be recruited through contacts with schools, parents’ associations, and clinical centers, including the Developmental Clinical Psychology Unit at HSR-Turro. A total of 210 children will be enrolled, including the three groups of children (Dyscalculia, ADHD, TD). The project will be developed in a 3-years PhD program: (1) literature review, preparation of the testing battery and training for test administration, contacts with schools, associations and clinical centers; (2) data collection; (3) data elaboration and writing.

Competenze che deve acquisire lo studente/skills to be acquired by the student (Max 600 caratteri spazi inclusi/ *Number of characters, including spaces: max 600*):

- deep knowledge of the neuropsychological profile of Specific Learning Disorders, specifically dyscalculia, and ADHD in developmental age
- deep knowledge of the literature on the construct of time processing and of the ways for measuring it
- administration of neurophysiological tests to 8-13 years-old children
- administration of questionnaires to teachers and parents
- data analysis
- handling data collection within schools, including contacting school principals, explaining the research work to parents, teachers and children, reporting to them the study’s results
- working in team
- academic writing

Bibliografia/References (max. 15)

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