

POSTER: SYSTEMIC APPROACH IN THE INVESTIGATION OF MOTOR COMPETENCE, EXECUTIVE FUNCTIONS, CARDIORESPIRATORY FITNESS AND PHYSICAL ACTIVITY OF SCHOOLCHILDREN: A STUDY OF NETWORKS

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Objective: To investigate the network of relationships between motor competence (MC), executive functions (EF), cardiorespiratory fitness (CRFit), and physical activity (PA) in schoolchildren. **Methods:** 211 public school students, separated into younger (7 to 10 years old) and older children (11 to 14 years old) were tested for: (a) MC: locomotion and object control; (b) EF: visuospatial working memory, inhibitory control, and cognitive flexibility; (c) CRFit; (d) PA (total score of moderate and vigorous activity). After the descriptive analysis, an exploratory factor analysis indicated a low factor load (0.331; $p = 0.000$) for the cognitive flexibility that was removed from the analyzes. In the network analysis (JASP version 0.11.1), the sample had the centrality indexes of the variables examined: connectivity, closeness, and magnitude. **Results:** for the younger children, the MC of locomotion was the variable that establishes the most robust connections with the highest connectivity (1,269), closeness (1,558) and magnitude (1.053); these results indicated that locomotion MC is the central variable influencing the system. In older children, the variable with the most expressive centrality indices was working memory (connectivity = 1.880, proximity = 1.327, and magnitude= 1.587). In general, the results suggested that the dynamic of relationships evolve in different stages of development. **Implications:** This study emphasizes the need for a more comprehensive look at the child's active and healthy development by observing the dynamic articulation between behavioral variables and a possible hierarchical organization between them.