THE INFLUENCE OF PRIOR KNOWLEDGE ON THE LEARNING OF NEW MOVEMENTS ACROSS THE HUMAN LIFESPAN
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The speed by which we acquire new knowledge critically depends on what we already know; new information is rapidly acquired when it is compatible with previously learned and consolidated knowledge (i.e., an acquired schema). Relatively little is known about how this schema effect differs across the human lifespan. The current study aims to examine the schema effect across the human lifespan through the use of a motor sequence learning paradigm. Two hundred participants, divided into groups of children (7-12 years old), adolescents (13-17 years old), young adults (18-35 years old) and older adults (> 55 years old), will complete a bimanual Serial Reaction Time Task (SRTT) administered through an online data acquisition platform. Twenty-four hours after the acquisition of an initial motor sequence, participants will learn a new sequence that is either highly compatible or incompatible with the initial sequence. The effect of sequence compatibility will be examined across the different age groups, allowing us to assess the schema effect across the lifespan. The results of the study will contribute to the narrow selection of literature on the schema effect and motor learning; however, further investigation of how schemas influence motor learning is necessary to better understand how learning and motor movements inherently change throughout the lifespan and improve relevant clinical practices.