



## EDITORIAL

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Dear Researchers and Readers,

In this issue, we present a selection of current and multidimensional studies conducted across various subfields of the health sciences. These studies offer valuable insights that span clinical practice, public health, nutritional strategies, and neurophysiological interventions—contributing to a comprehensive understanding of physical, mental, and social well-being.

Some of the featured research focuses on evaluating human movement systems, the biomechanical effects of posture, and injury management, while others explore recovery processes and metabolic challenges associated with aging. Investigations into the relationship between dietary habits, mental health, and academic performance provide a multidimensional perspective on the quality of life among young adults. Meanwhile, studies examining neurophysiological interventions shed light on the interplay between the nervous system and behavioral health.

In addition to these diverse contributions, we would like to highlight a noteworthy direction emerging at the intersection of health sciences and artificial intelligence (AI). AI has introduced groundbreaking innovations in the assessment and support of speech and language disorders. In this context, our ongoing several research conducted within the Department of Speech and Language Therapy has focused on the automatic detection of stuttering through auditory and visual modalities. On the visual side, facial expressions, oral movements, and micro-mimic patterns are analyzed to detect moments of disfluency; on the auditory side, speech signals are processed to identify repetitions, blocks, and prolongations—typical patterns of stuttering—through AI-based models. These systems aim to offer objective support in early diagnosis, therapeutic planning, and monitoring of treatment outcomes. This technological foundation has also been extended into the realm of social interaction. Through natural language processing-based analyses, we have been working on the detection of cyberbullying targeting individuals who stutter, analyzing social media content for negative or exclusionary language to inform both individual and societal-level protective strategies.

Additionally, our AI-driven systems designed to interpret the facial expressions of children with Down syndrome aim to enhance the understanding of emotional communication in this population. These tools serve diagnostic and educational functions, contributing to more inclusive clinical and instructional approaches. Collectively, these studies underscore that AI should not only be viewed as a technical tool but also as a clinical support framework that carries significant ethical responsibility.

We hope the diversity and innovation represented in this issue will inspire future research and lead to new developments in health sciences.

**Sincerely,**

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