

Introduction

The development of modern neuropsychology is characterized by the integration of various issues that have previously been the domain of other fields and science disciplines. It should rise to numerous practical challenges resulting from advancing age of the population or the increasing number of patients with somatic illnesses posing the risk of CNS dysfunctions. The advancement in the range of methods used in neuropsychology is also observed. It is worth emphasizing their digitization, and drawing attention to the ecological and evidence-based value of diagnostic and therapeutic intervention. Neuropsychologists also refine and develop various procedures and methods of diagnostic contact with a person with CNS dysfunction. This interest has increased as a result of restrictions related to the SARS-CoV-2 pandemic and the need to diagnose the behavioral effects of COVID-19.

The invitation to this issue was accepted by academic neuropsychologists with practical experience. The scope of the articles reflects the above-mentioned diversity of research directions and practical interventions in neuropsychology.

In the article written by Krzysztof Jodzio, the purpose of the research was to provide a multifaceted description of neuropsychological disorders of selected linguistic and cognitive processes involved in solving problems containing metaphors and similarities in individuals with acquired cerebellar pathology. The article emphasizes that cerebellar dysfunctions disturb the processual nature of knowledge relevant to associative thinking, reasoning by analogy and the interpretation of hidden content. The Author suggests, that the individualization of diagnostic and therapeutic approaches for patients with this type of disturbances is essential.

Alternative ways of carrying out diagnostic procedures were demanded during the SARS-CoV-2 pandemic. This trend of research interests is reflected in the article of Ewa Malinowska, Dominika Żarnecka, Emilia Łojek and the Neuro-Covid Research Team of the Faculty of Psychology at the University of Warsaw. The telephone neuropsychological assessment tools were administered to recognize cognitive problems of individuals after COVID-19. The Authors state both limitations and usefulness of employing remote methods during diagnosis. They find decreased condition after COVID-19 in the range of selected cognitive functions.

Current neuropsychology emphasizes the necessity of diagnosing individuals with somatic chronic diseases. The specificity of these illnesses may lead to the changes in the CNS and, consequently, dysfunctions in cognitive processes

including prospective memory. Marta Witkowska attempts to estimate cognitive abilities of individuals with chronic respiratory diseases. Described predictors of decreased prospective memory performance in this group of patients seem to have substantial value for prevention, treatment and maintenance of the regime of compliance with medical recommendations formulated for patients with obstructive pulmonary disease.

Taking advantages of technological progress, neuropsychologists can monitor the activity of tests subjects by recording data in real time using everyday devices (smartwatch, phone). Natalia Gawron, Aleksander Zębrowski and Beata Hintze assess the relationships between physical activity (by pedometer) of participants in middle and late adulthood and their cognitive functioning. They emphasize the relevant role of physical activity in supporting cognitive reserve and enhancing the capabilities of individuals in the second half of their life.

In the review article Magdalena Roessler-Górecka highlights that apathy syndrome is usually described in the context of psychiatric problems. Nevertheless, it also appears in the course of CNS diseases of various aetiology (e.g. Parkinson disease, Huntington disease, after strokes or craniocerebral injury). The definitional problems, subtypes of apathy, diagnostic criteria, including the differentiation of apathy and depression, and diagnostic methods are discussed by the Author.

The issue ends with a review of the multi-authored monograph entitled *Wielowymiarowość funkcji wykonawczych – perspektywa rozwojowa i kliniczna* [*Multidimensionality of executive functions – a developmental and clinical perspective*], edited by Ewa Zawadzka and Sara Filipiak (2022, Maria Curie-Skłodowska University Publishing House), prepared by Ernest Tyburski. The state of research, existing and developing diagnostic direction and therapeutic interventions for individuals with executive dysfunction are discussed in the review and empirical chapters of the publication.

We are convinced that the content of the texts will be an inspiration to broaden research directions and incorporate new solutions into the process of neuropsychological diagnosis that corresponding to the current needs of society.

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