

Abstract

In majority of schizophrenia patients, from the first episode of psychosis throughout the entire span of the illness, a cognitive deficit is one of the core symptoms. Assessing cognitive performance with empirically based methods is a vital part of clinical practice. Until recently, Czech adaptations of the MATRICS battery (standardly used for assessing cognition in schizophrenia worldwide) and the Tower of London, ToL (a basic test measure of executive planning ability) were absent.

The primary aim of this dissertation thesis was to provide these methods for research and clinical use in Czech professional environment. This goal was achieved with both ToL and MATRICS in two basic steps. Firstly, Czech adaptations of both tests were carried out, namely translation of test instructions and establishment of standard administration and scoring. Secondly, complex psychometric analyses were conducted for both tests, including validation of their Czech versions for the purpose of assessing cognitive impairment in schizophrenia.

The results suggest that ToL is a suitable tool for recognising executive planning deficit in general as well as in schizophrenia patients specifically. Also, the planning ability in schizophrenia patients, as measured by ToL, is one standard deviation below average when compared to healthy subjects. Introducing Czech ToL normative data was also a part of this study. For the MATRICS battery using confirmatory factor analysis, fit of a six-factor model was established, the six factors being: processing speed, attention / vigilance, working memory, verbal learning, visual learning, thinking and problem solving. Therefore, the MATRICS battery can be considered a sufficient tool for differentiation of diverse cognitive profiles. The performance within individual cognitive domains was significantly lower for schizophrenia patients in comparison with healthy subjects, most prominently in processing speed. The social cognition domain had proven to have very low discriminative ability. Furthermore, the applicability of a one-factor model was confirmed as well, which suggests the possibility of using the composite MATRICS score as a generalizing index of cognitive deficit in patients with schizophrenia.

Key words: cognitive functions, schizophrenia, Tower of London, MCCB, MATRICS Cognitive Consensus Battery