

**Abstract:**

This diploma thesis is introducing Trail Making Test – Part A as a tool for assessment of cognitive deficit in schizophrenia. Cognitive deficit is one of the core symptoms of schizophrenia which plays a key role in the final psychosocial functioning in the life of people with schizophrenia. Therefore, it is important to pay attention to the efficiency of interventions focused on improving cognitive functions and the quality of diagnostics.

In this paper we were verifying a validity of TMT-A in use of cognitive deficit in schizophrenia. We have found out that the test discriminates between clinical and healthy population (n=332) quite well. Participants with schizophrenia scored significantly worse than the healthy volunteers in the time variable. We have not found any difference in the number of errors in TMT-A between the groups. In the ROC analysis we were verifying if the TMT-A has enough good sensitivity and specificity and we found positive results. The AUC value was large for the age category of 18-44 as well as for particular age subgroups. Using the regression analysis we controlled for the demographic differences of the clinical and healthy groups and we estimated the difference between the performance of clinical and healthy population of about 11,9 seconds. Due to the general nature of TMT-A, the speed of processing is dependent on many other variables, for instance fatigue, anxiety, mood or used medication. Thus, we interpret the value of cutoff scores and the value of the difference in time in TMT-A from regression with particular caution. We also recommend continuing the study with demographically more balanced research groups.

Overall, we consider TMT-A as the valid tool for assessment of cognitive deficit in schizophrenia.

**Keywords:**

Trail Making Test – Part A, validation, schizophrenia, MATRICS, cognitive functions, cognitive deficits, neuropsychological diagnostics