

Abstract:

This bachelor thesis is focused on the application of olfactory deficiency in neuropsychological diagnostics of Alzheimer's disease. Firstly, in the theoretical part, the work shortly summarizes current knowledge regarding neuropsychological diagnostics of Alzheimer's disease, with an emphasis on the new diagnostics criteria and usage of various kinds of biomarkers. Furthermore there is thoroughly covered the topic of olfactory deficiency as an early biomarker of Alzheimer's disease, while focusing on olfactometry employing psychophysical subjective tests. The work also stresses out the possibility of cognitive conditionality of some of the smell tests, most prominently the odor identification test.

The issue of cognitive demands of smell tests is also further entertained in the research part, where a study of possible cognitive correlates of the Odor Identification test is proposed. For this purpose was chosen the Odor Identification test from the extended set of Sniffin' Sticks and the neuropsychological test battery Uniform Data Set. The main presumed candidates for cognitive correlates of the smell test are tests of language functions, especially the Boston Naming Test measuring naming ability. The research proposed here is based on controlling influence of cognitive deficits on the Odor Identification test using stepwise regression analysis.

Keywords:

Alzheimer's disease, olfactory deficiency, smell test, neuropsychological diagnostics