Abilitest Battery: Presentation of Tests and Psychometric Properties

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Abstract : Introduction: Cognitive skills are a crucial part of everyday functioning. Cognitive skills include perception, attention, language, memory, executive functions, and higher cognitive skills. With the aging of societies, there is an increasing percentage of people whose cognitive skills decline. Cognitive skills affect work performance. The appropriate diagnosis of a worker's cognitive skills reduces the risk of errors and accidents at work which is also important for senior workers. The study aimed to prepare new cognitive tests for adults aged 20-60 and assess the psychometric properties of the tests. The project responds to the need for reliable and accurate methods of assessing cognitive performance. Computer tests were developed to assess psychomotor performance, attention, and working memory. Method: Two hundred eighty people aged 20-60 will participate in the study in 4 age groups. Inclusion criteria for the study were: no subjective cognitive impairment, no history of severe head injuries, chronic diseases, psychiatric and neurological diseases. The research will be conducted from February - to June 2022. Cognitive tests: 1) Measurement of psychomotor performance: Reaction time, Reaction time with selective attention component; 2) Measurement of sustained attention: Visual search (dots), Visual search (numbers); 3) Measurement of working memory: Remembering words, Remembering letters. To assess the validity and the reliability subjects will perform the Vienna Test System, i.e., "Reaction Test" (reaction time), "Signal Detection" (sustained attention), "Corsi Block-Tapping Test" (working memory), and Perception and Attention Test (TUS), Colour Trails Test (CTT), Digit Span – subtest from The Wechsler Adult Intelligence Scale. Eighty people will be invited to a session after three months aimed to assess the consistency over time. Results: Due to ongoing research, the detailed results from 280 people will be shown at the conference separately in each age group. The results of correlation analysis with the Vienna Test System will be demonstrated as well.

Keywords : aging, attention, cognitive skills, cognitive tests, psychomotor performance, working memory

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