

Comparing different memory assessment tests and biomarkers of Alzheimer's disease (A $\beta$  (1-42) / tau-protein), has shown that FCSRT-IT test is the best in detecting early signs of degeneration of Alzheimer's type.

Many patients in elderly have increased risk of postoperative delirium.

There is a need for developing of algorithm of diagnosis and assessment of risk factors of this pathology. Understanding of pathogenesis and predictors of developing of postoperative delirium would allow using prophylactic measures before surgical treatment.

Timely and comprehensive assessment allows detecting postoperative delirium on early stages and increasing quality of psychoneurological help in these patients.

**Conclusion:** Hippocampal dysfunction is a factor of developing of postoperative delirium in elderly patients that requires using additional measures in patients with mild cognitive disturbance to prevent developing of postoperative delirium.

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## AGE-RELATED CHANGES OF COGNITIVE FUNCTIONS OF MEDICAL WORKERS

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**Background:** The current socio-demographic situation is characterized by an aging population. Globally, the group of people aged 60 years and older is growing at a faster rate than other population groups. Ageing is accelerating in all regions of the world. In this regard, older persons are increasingly seen as active participants in the process of social development. This determines the need for the elderly person to be an active subject of the social process and retain their cognitive abilities. To maintain adequate social activity and preserve "social capital", longterm good physical and mental health is necessary. The quality of "social capital", social activity, participation in decision-making in the community, lack of need for care in everyday life, the depth of social relations are related to the quality of the cognitive functions of the elderly. Cognitive disorders limit the possibility of participation of an aging person in social and production processes and require additional costs from family members, society, social services and health care, the state for the maintenance and treatment of an elderly person. Diagnostic criteria of age-related cognitive forms are contradictory and insufficient. Researchers and clinicians note that it is very difficult to distinguish "normal aging" from degenerative and cerebrovascular pathology. This is due to the lack of sensitivity of standard neurocognitive scales. A large-scale study of aging in a large national sample of older people in England showed that cognitive aging has several possible trajectories. Gender-specific models included age, sex, education, financial condition, concomitant somatic diseases, physical activity, alcohol intake, Smoking, depression. Gender, age, depression, physical inactivity were important parameters for the rate of General aging. Of the cognitive functions, Executive functions and global cognitive function were the most sensitive. The review of studies shows the lack of a unified methodological approach to the assessment of neurocognitive functions in aging. Fixation of disparate indicators does not allow understanding the process of General cognitive aging. Varako N. A. et al. neuropsychological assessment by A. R. Luria (praxis, gnosis, reading, calculation, attention, memory, reasoning, visual-spatial and Executive functions) was used. Heterogeneity of cognitive aging, neuropsychological mechanisms of possible compensation of reduced functions were revealed. Intensive rates of demographic aging, the need to maintain social and cognitive activity of the elderly determine the relevance of studies of normative aging. The lack of a unified methodological approach to the study of normative aging and a standardized set of cognitive assessment tests allows developing their own psychometric tools.

The aim of the study is to investigate age-related dynamics of cognitive functions of health workers as members of society.

**Subjects and methods:** Participants of the study-148 employees of medical institutions: 12 men, 136 women, their age ranged from 27 to 74 years. The average age was 45.1+5.7 years. Inclusion criteria: 1. Right-handed (leading right hand). 2. There are no clinically significant diseases (somatic and mental disorders) in the history. Neuropsychological and statistical research methods were applied. The research tool was the neuropsychological rapid method, including the subtests: "Memorizing 9 words in three

presentations (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> attempts)", "Sequential subtraction ", " Test "of Benton's visual memory", "Solving an arithmetic problem", "Overlaid images", "Specified flow of associations in 1 minute", "Figure of 3 geometric figures", "Blind hours", "Graph-motor test", "Delay word reproduction". Statistical data processing was performed using SPSS Statistics 17.0 and Microsoft Office Excel 2007. The Mann-Whitney U-test was used to compare the results of the subjects in different age groups and determine the significance of differences.

**Results:** 3 research subgroups were formed: 27-40 years, 41-50 years, 51 years and older. The educational level in the selected age subgroups is heterogeneous, which probably corresponds to the age distribution of these indicators among the staff of medical institutions included in this study. The heterogeneity of the educational level of the studied is not significant for assessing the state of their cognitive functions, since their instrumental (basic) parameters were evaluated. Comparison of the results of subtests of neuropsychological Express technique showed heterogeneous results in subgroups of the study. In addition, the dynamic characteristics of psychological processes were evaluated: depletion, inertia, impulsivity. A significant difference in the performance of the graph motor test between the subjects of the age subgroup (27-40 years) and the subgroup (41-50 years) was statistically confirmed. The test was carried out using a marker that left a mark on the paper, the parameter of the total severity of regulatory errors introduced into the processing, in the form of the sum of penalty points normalized with respect to the number of series of patterns performed by each test subject. During this test, a series of movements was mastered, consisting of separate arbitrarily controlled links, since the automation of movement, arbitrary control over the implementation of each of the links decreased, the speed of movements increased. For the qualitative performance of this simple test requires a sufficient level of development of all structural and functional components of brain functions and, in particular, the "front" function of programming and management and consistent organization of movements. In older people revealed a much greater number of errors, interruptions of the test than the representatives of the more "young" subgroup. Similar results were obtained when comparing the "young" and "old" subgroups. Thus, the complexity in development and automation of graph motor skill increase with age. When comparing the results of all neuropsychological tests in representatives of the "average" and "old" subgroups no statistically significant results were found.

**Conclusions:** 1. Performance indicators of neuropsychological subtests of the right-handed group under study decrease unevenly as they age. 2. The study revealed that the participants of the study - young hospital workers coped better with the implementation of graph motor tests than their older colleagues. In the older participants of the study, the evaluation of the strategy of the new figure correlated with a slight decrease in predominantly nonverbal and to a lesser extent with verbal Executive functions, with a slow pace of neurocognitive decisions of the highest order and a lower speed of information processing.

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## COMMUNITY - BASED PSYCHIATRY IN CROATIA: CHALLENGES AND EXPERIENCES

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There is a plenty of evidence for the effectiveness of community-based interventions to achieve a recovery, optimal quality of life and destigmatization of persons with mental disorders. Flexible assertive community treatment teams that provide psychiatric care at homes of these patients are particularly important because of their focus on recovery processes. Implementation of community-based mental healthcare into the Croatian healthcare system is currently limited. In spite of that, a pilot project "Launching Community Mental Health Protection Teams" was realized by the Ministry of Health of the Republic of Croatia during 2017 and 2018, as an establishment of an innovative concept of Community-based psychiatry at the national level. Three mobile psychiatric teams represented the most important segment of the project within the University Psychiatric Hospital Vrapce, the General Hospital Karlovac and the General Hospital "Dr. Josip Bencevic" Slavonski Brod. Interventions that have been carried out significantly contributed to remission, recovery, life quality improvement and destigmatization of those with mental disorders. Finally, this presentation will analyze the perspective of the implementation of this model with challenges and limitations caused by the specifics of the Croatian public health system.

**Key words:** Community-based psychiatry - mobile psychiatric teams - recovery - Croatia