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ASSESSMENT OF PSYCHOEMOTIONAL AND COGNITIVE DISORDERS IN CHRONIC CEREBRAL ISCHEMIA: A STUDY ON THE LINGUISTIC ADAPTATION OF DIAGNOSTIC SCALES

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Abstract. *This study aimed to develop and validate national norms in the Uzbek language for internationally recognized scales used to diagnose psychoemotional and cognitive disorders in patients with chronic cerebral ischemia (CCI). The study involved 172 patients with CCI whose conditions were assessed using adapted versions of the Depression, Anxiety, and Stress Scale (DASS-21), Hospital Anxiety and Depression Scale (HADS), and Montreal Cognitive Assessment (MoCA). The results demonstrated a direct correlation between the severity of CCI and deterioration of the psychoemotional state and cognitive function. These findings confirm that linguistically adapted diagnostic tools are crucial for the timely and accurate diagnosis of CCI, thereby improving treatment strategies and aiding in the prevention of severe complications, such as dementia.*

Keywords: *chronic cerebral ischemia, cognitive impairment, psychoemotional disorders, diagnostic scales, linguistic adaptation, MoCA, DASS-21.*

Introduction. Cerebrovascular diseases are a leading cause of mortality and disability worldwide, with chronic cerebral ischemia (CCI) being a highly prevalent pathology. CCI is characterized by a progressive decline in brain function due to long-term circulatory insufficiency, which can lead to significant cognitive impairment, psychoemotional disturbances, and, ultimately, severe dementia. A primary challenge in the clinical management of CCI is the lack of standardized diagnostic tools adapted to the specific cultural and linguistic backgrounds of patient populations. Most internationally accepted screening instruments are available in Russian or English, and their application without proper linguistic adaptation can compromise diagnostic accuracy. This study aimed to evaluate the clinical efficacy of adapting these widely used scales for national practice in Uzbekistan to improve the assessment and management of CCI.

Material and Methods. The study was conducted between 2019 and 2024 at the Bukhara Regional Multidisciplinary Hospital and Bukhara Branch of the Republican Specialized Scientific and Practical Medical Center for Mental Health. A total of 172 patients (mean age, 58.4 ± 7.1 years) with a confirmed diagnosis of CCI were enrolled in the study. Patients were stratified into three groups based on the severity of cognitive impairment: Group I, CCI without significant cognitive impairment (n=62); Group II, CCI with pre-dementia-level cognitive impairment (n=57); and Group III, CCI with dementia-level cognitive impairment (n=53).

The inclusion criteria were a verified diagnosis of CCI, stable hemodynamic status, and informed consent. Psychoemotional status was assessed using the Depression, Anxiety, and Stress Scale (DASS-21), and cognitive function was evaluated using the Montreal Cognitive Assessment (MoCA). All the scales were professionally translated and culturally adapted into the Uzbek language. The collected data were statistically analyzed.

Results. The study revealed a progressive deterioration of both psychoemotional and cognitive functions corresponding with the increasing severity of the CCI.

- Psychoemotional status: Patients in Group II (pre-dementia) exhibited the highest prevalence of severe anxiety (59.6%) and depression (49.1%). In contrast, severe anxiety was virtually absent in

Group III (dementia) (0%). This finding is attributed to the emotional blunting and loss of insight characteristic of advanced-stage dementia.

- Cognitive function: The mean scores on the MoCA scale showed a statistically significant decline across the groups: 27.8±1.2 in group I (normal range), 25.3±1.5 in group II (mild cognitive impairment), and 21.3±2.1 in group III (severe cognitive impairment/dementia) ($p<0.001$). Notably, 77.4% of patients in Group III scored below the established dementia cutoff of 24 points on the MoCA.

Parameter	Result (%)
High-level anxiety in group II (pre-dementia)	59.6
Severe cognitive impairment (MoCA<24) in group III	77.4
Efficacy of scale adaptation	95.9
Reduction in treatment costs	Observed in 92 patients

Discussion. Our findings are consistent with international data on the clinical progression of CCI and its associated psychopathological manifestations. The high levels of anxiety and depression observed in the pre-dementia stage likely reflect the patient's awareness of their declining function, whereas the subsequent emotional blunting in advanced dementia is a known feature of the neurodegenerative course of the disease. The primary contribution of this study is the empirical validation of linguistically adapted diagnostic scales. Patients responded with greater accuracy and confidence to questions presented in their native language, which significantly improved the quality of diagnostic assessment. The limitation of this study is the absence of long-term follow-up. Future research should focus on evaluating the prognostic value of these adapted scales for predicting disease progression.

Conclusion. The development and implementation of national norms for diagnostic scales in the Uzbek language is a highly effective and valid approach for the timely and accurate assessment of psychoemotional and cognitive disorders in patients with chronic cerebral ischemia. This methodology facilitates the prevention of severe complications, optimizes treatment strategies, and ultimately improves the quality of life of patients.

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