

COGNITIVE IMPAIRMENT WITHOUT SUBJECTIVE COGNITIVE DECLINE - CLINICAL,
MOLECULAR AND ETHICAL ASPECTS

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Cognitive impairment (CI) was accidentally discovered among healthy volunteers that were recruited for the research on Alzheimer's disease (AD). Although subjective cognitive decline (SCD) was not present, when tested by using Mini-Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA), these volunteers scored below 26 on at least one of these two tests. MoCA and MMSE results were in correlation ($r=0.725$; $p<0.01$), but MoCA proved to be more sensitive, since CI would not be discovered in 22,2% of examinees if they were evaluated by MMSE only. In order to investigate potential causes of CI, examinees with lower MoCA scores (CI, $n=9$) were compared to those with normal cognition (NC, $n=18$).

MoCA score showed positive correlation with the participants' years of education ($r=0.491$; $p<0.05$), suggesting that education level influences subjective comprehension of the importance of changes in cognition, which might be a critical sign of impaired health. CI and NC group were not significantly different regarding the age and presence of depression.

Interestingly, CI group was found to have higher expression of circulatory miRNA-146a-5p and miRNA-155-5p, compared to NC group. These miRNAs are involved in AD pathways, such as inflammation and oxidative stress. Neurological examination and laboratory tests excluded presence of other diseases that could cause CI.

MoCA test should be routinely administered to elderly in Montenegro, even without SCD, but cross-cultural validity of its cutoff score and its adjustment for our region should be explored. In the absence of SCD, complete clinical evaluation of CI group represents an ethical dilemma.