

Characterization of functional impairment in Latin American Individuals with frontotemporal dementia and Alzheimer's Disease

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Introduction

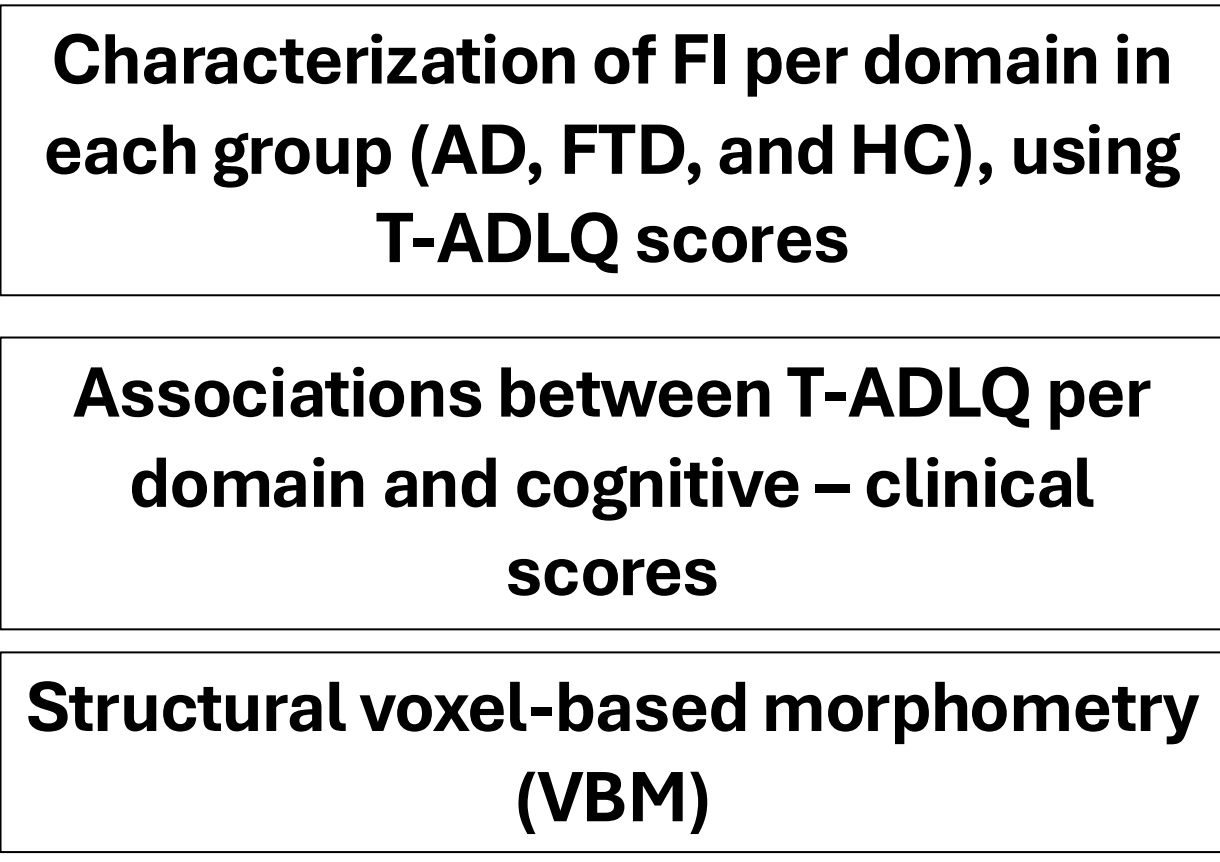
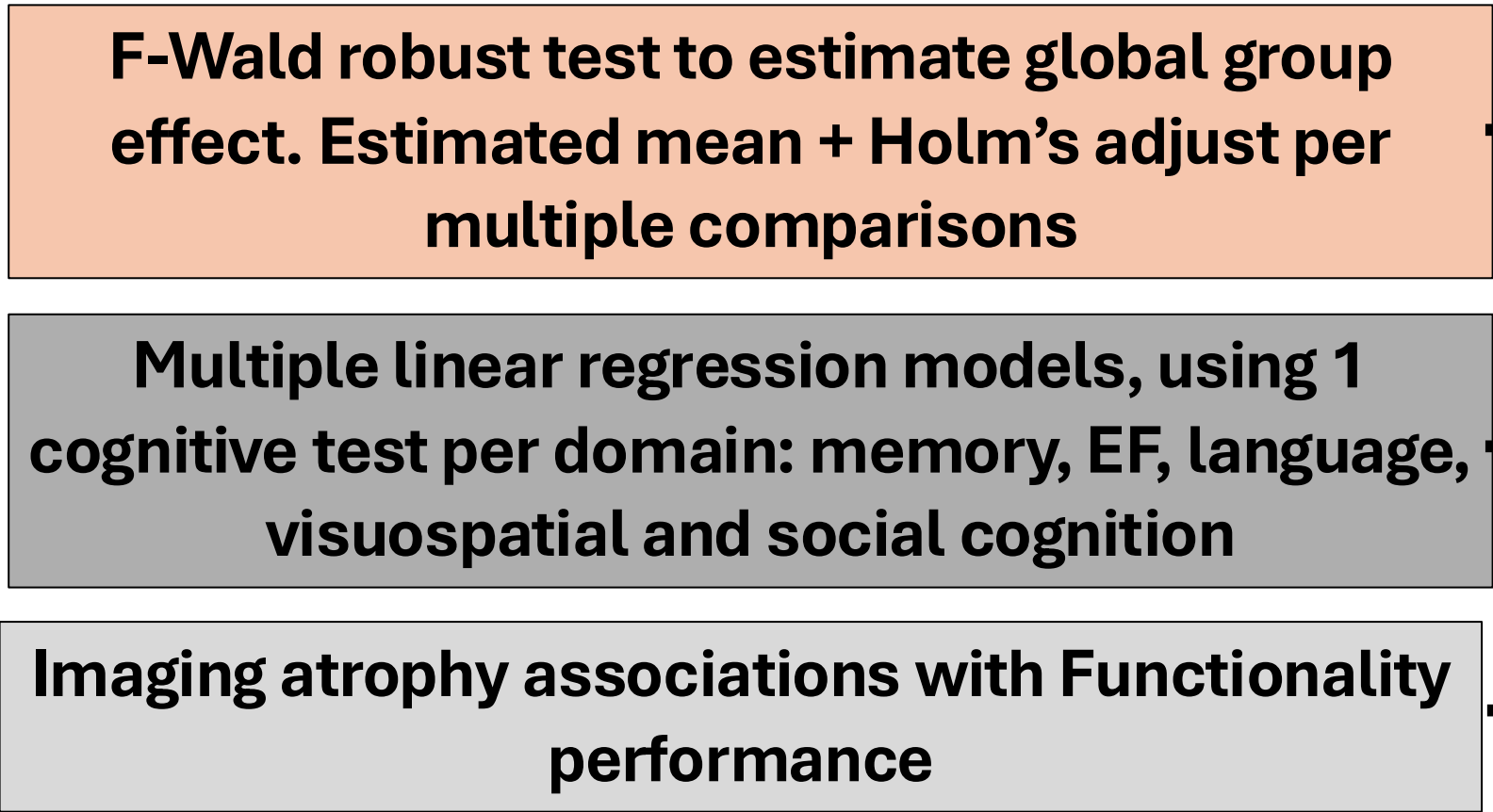
Functional impairment (FI) in activities of daily living (ADL) is a critical criterion for diagnosing dementia and can be categorized into three dimensions: basic (BADL), instrumental (IADL), and advanced (aADL). While FI has been well studied in Alzheimer's Disease (AD), this characterization has been underexplored in Frontotemporal Dementia (FTD), and even more in Latin American Countries, where genetic and exposome diversity defines variability in its clinical presentation.

Methods

1259
participants



541 aAD
599 HC
119 bvFTD



Results

1. After adjusting for age, sex, education, and CDR total, FTD individuals present higher FI in global and the three domains evaluated by T-ADLQ

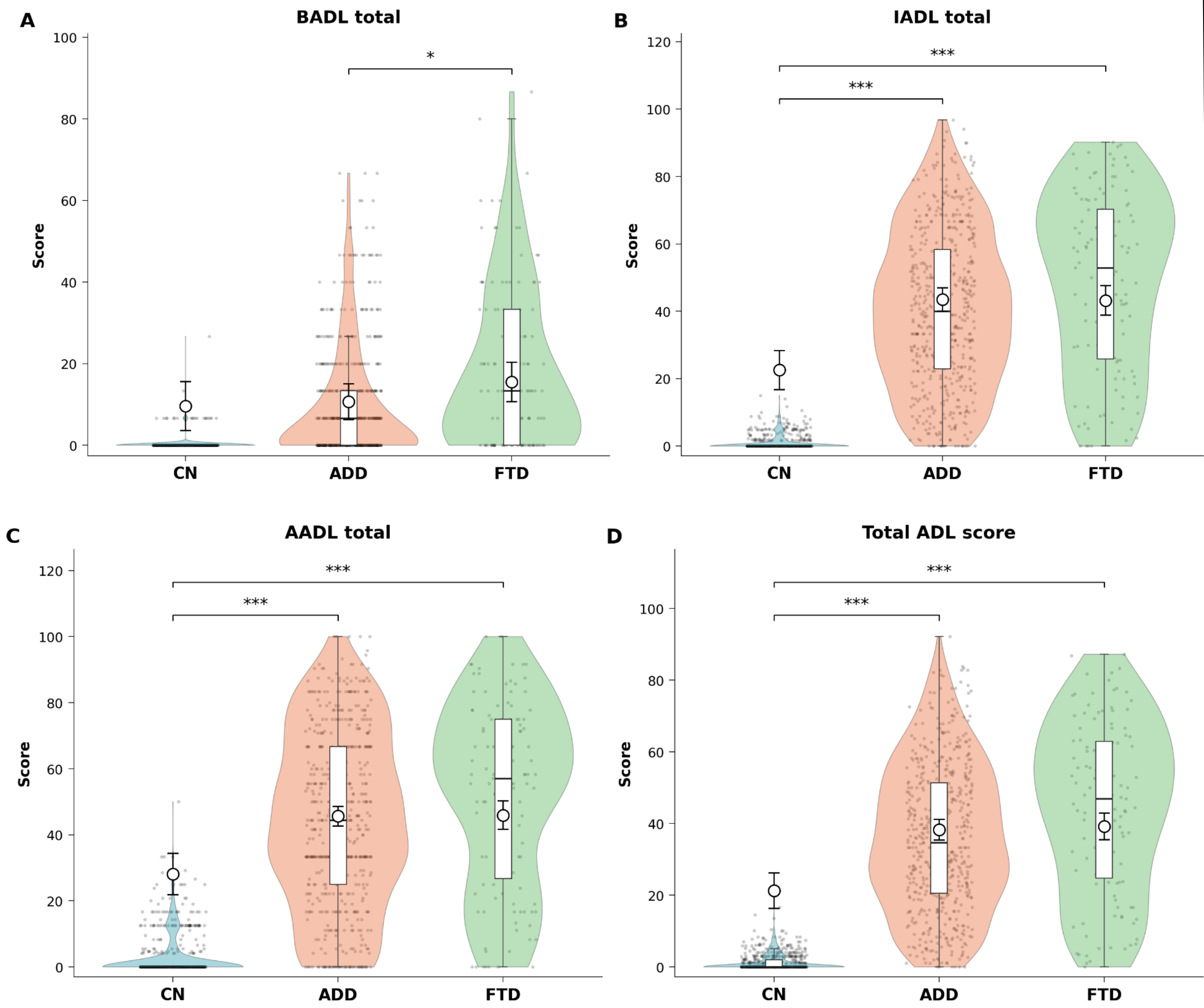
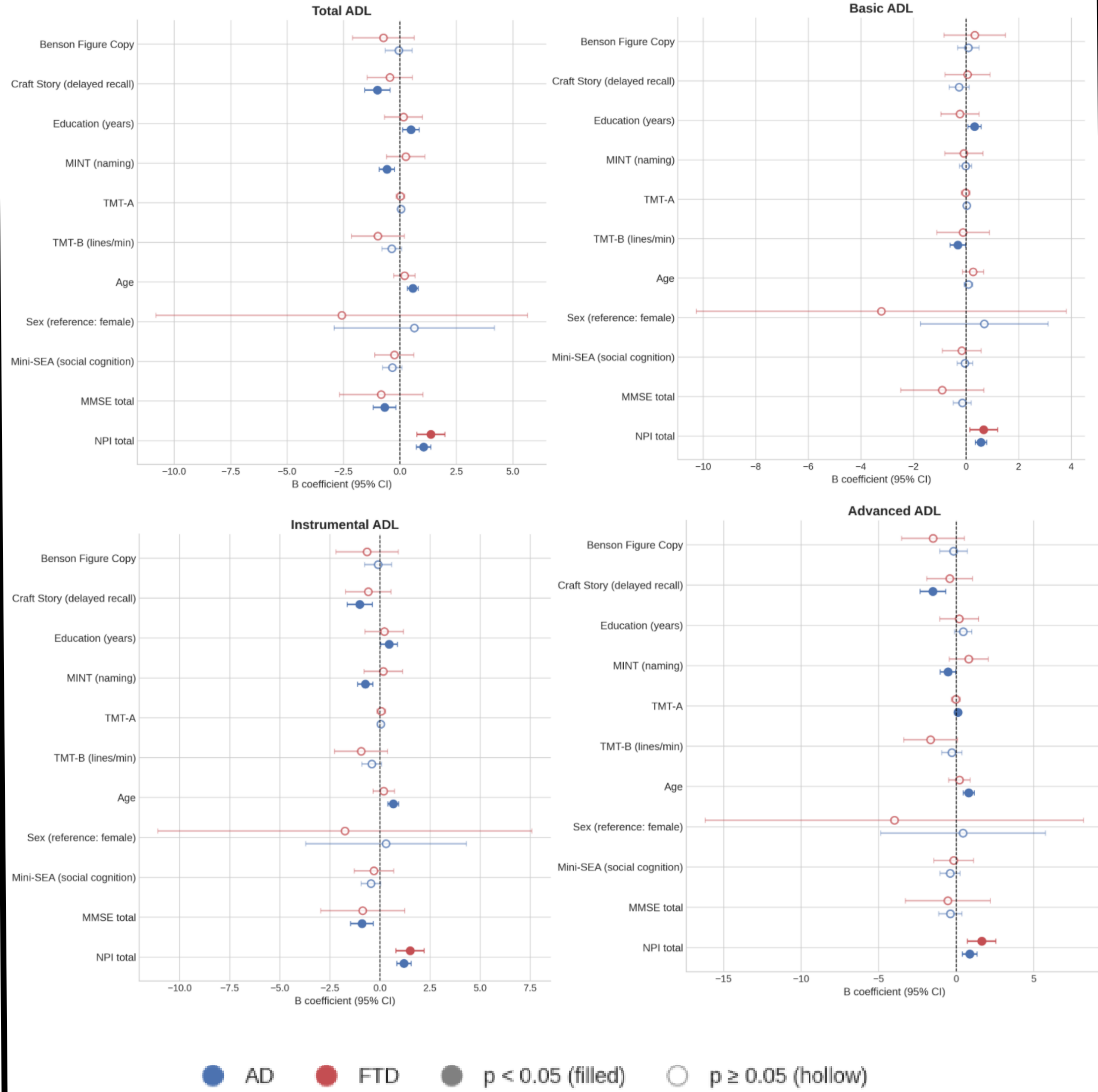


Figure 1: Adjusted means for T-ADLQ scores per domain

2. FI in AD is associated with memory, executive function, language and neuropsychiatric symptoms, however in FTD FI is associated exclusively with neuropsychiatric symptoms



2. In FTD, FI in BADL is associated with atrophy in orbitofrontal, cingulum and medial temporal lobe, while in AD is associated almost exclusively with hippocampus and parahippocampus

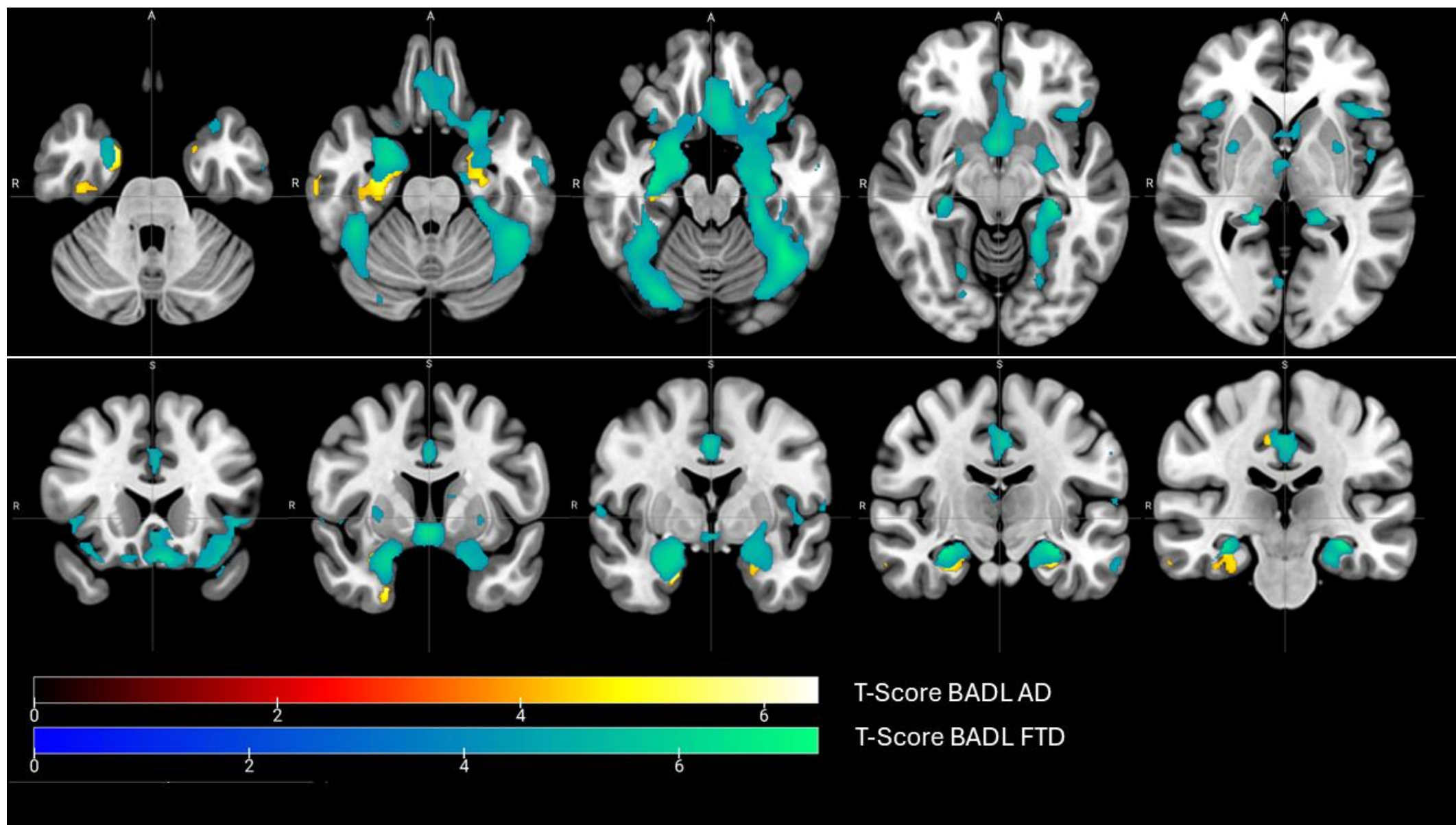


Figure 2: VBM regression results for atrophy vs Basic T-ADLQ score associations

Take-home messages

1. bvFTD individuals present significantly higher levels of functional impairment in the basic score of ADL, compared with aAD individuals. The T-ADLQ test allows this special pattern to be uncovered.
2. In FTD, total and all domains of T-ADLQ scores are associated only with the NPI score. In AD, the scores are further associated with other cognitive domains, such as memory, executive function, and language, uncovering a distinct pattern in this group.
3. In the imaging analysis, VBM shows a different pattern of atrophy in basic ADL performance in FTD, compared with AD. While AD presents associations with atrophy in both the hippocampus and the medial temporal lobe, FTD presents a widespread pattern compromising further cingulum, orbitofrontal cortex, and other areas.

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