

Does personality predict behavioral and psychological symptoms of dementia? Results from PACO study.

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Introduction Alzheimer's disease (AD) is characterized by cognitive impairment frequently accompanied by Behavioral and Psychological Symptoms of Dementia (BPSD). Retrospective results suggest that premorbid personality could play a role in the onset of BPSD. The present prospective PACO study aimed at assessing the influence of personality traits on subsequent occurrence of BPSD in a population of patients with AD. **Methods** Study design: multicenter prospective cohort study of 237 patients with prodromal or mild AD. Personality traits were assessed at baseline with the NEO-PI-R. The patients were followed-up at 6-month intervals over a period of 18 months. BPSD were assessed using Neuropsychiatric Inventory (NPI). The association between personality and BPSD evolution was measured with mixed linear models. **Results** Higher neuroticism was significantly associated with a higher score on affective ($p < 0.0001$), apathy ($p = 0.002$), sleep disorders ($p = 0.001$) and global NPI scores ($p < 0.0001$). Greater conscientiousness was related to a lower score on psychosis ($p = 0.002$), affective ($p = 0.02$) and apathy ($p = 0.02$) subscores and global NPI score ($p < 0.0001$). Higher openness was associated with lower affective score ($p = 0.01$). A significant relationship was shown between higher extraversion, lower affective ($p = 0.02$) and higher behavioral dyscontrol scores ($p = 0.04$). Finally, higher agreeableness was linked to a lower psychosis score ($p = 0.05$). **Conclusion** The present analysis suggests that higher neuroticism could increase the risk of BPSD over time. Conversely, higher openness, conscientiousness, extraversion and agreeability could be linked to a decreased risk of BPSD occurrence. Given these results, personality should be evaluated further to better identify patients at risk of developing BPSD during AD, to treat these disorders and limit their consequences for both patients and caregivers.