

If I lose my balance, does it change my cognitive abilities?

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It is well-known that patients with a bilateral vestibular loss suffer from balance disorders. Studies that have investigated cognitive and emotional problems in these patients have typically used questionnaires, with these showing significant increased complaints compared to control participants (Smith et al., 2010). However, it is still unclear if the vestibular loss also leads to cognitive impairments. Furthermore, no research has explored the specific link between the subjective complaints and objective cognitive assessments. In the present study, we compared patient's subjective responses to questionnaires of Dizziness Handicap Inventory (Jacobson & Newman, 1990), Hospital Anxiety Depression Scale (Zigmond & Snaith, 1983), and Neuropsychological Vertigo Inventory (Lacroix et al. 2016) to an objective neuropsychological assessment battery. We tested 13 patients with bilateral vestibular loss and 13 age and sex matched controls on the same assessments. Data analyses were performed using between groups ANOVA, with various independent variables associated with the different measures. The results showed a clear difference between groups for the subjective measures, replicating previous research, and showing that vestibular patients present with more subjective cognitive complaints than matched controls. However, interestingly, results on the objective neuropsychological measures failed to show statistically significant effects. These preliminary results suggest that even if patients believe that they have reduced cognition caused by their vestibular deficits, it remains challenging to demonstrate the effects using simple (standard) objective cognitive measures. We discuss the mismatch in results in terms of cognitive specificity and complexity.

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