4th International Conference on Research in Psychology

27 - 29 March 2024 Oxford, United Kingdom

Bilingualism contributes on cognitive reserve in Parkinson's Disease

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Abstract

bilingualism boosts Cognitive Reserve (CR) and some research indicates a 4 to 5-year delay in the onset of symptoms of dementia (Bialystok, 2007). The purpose of this study is to assess the impact of bilingualism on the CR and the age of diagnosis in Parkinson's Disease (PD).

16 non-demented monolingual (*M=68.56 years*) and 12 non-demented bilingual (*M=70.58 years*) patients with PD matched for age, sex and years of education participated. All the participants were native Spanish and their first language (L1) was Spanish. All subjects received a neuropsychological examination that assessed all cognitive domains. To measure CR they completed the Cognitive Reserve Index Questionnaire (*CRIq*) and for language proficiency the Bilingual Language Profile (*BLP*). Age at diagnosis was recorded (*monolingual M=61.61; bilingual M=64.89*).

bilinguals showed higher scores on the *CRIq* (*M=137.08*) compared to monolinguals (*M=122.56*) and those differences were significant (p=0.017). There was a positive correlation (*r= 0.527, p= 0.025*) between the *CRIq* and the utilisation of the second language (L2) (*BLP*), so those who used their L2 the most had the highest CR. Bilinguals were diagnosed 3 years later than monolinguals.

bilinguals with PD show higher levels of CR and are diagnosed at later ages than monolinguals. Other studies (Abutalebi. 2015) obtained similar results where the relationship between bilingualism and CR was also evidenced. Consequently, the results of this study suggest that bilingualism could contribute to CR by delaying the onset of clinical symptoms associated with PD.

Keywords: cognitive reserve; bilingualism; Parkinson's disease: diagnosis