

In 2019, the United States Census revealed that Hispanics are the greatest minority group in the U.S, 18% of the population; in 2060, it is expected to increase by 28%. Hispanics ages 65 have one of the highest rates of Alzheimer's disease (AD) in the U.S. Studies have linked AD and other cognitive impairments, MCI, with apolipoprotein or APOE gene. APOE has also shown to increase the risk of neuropsychiatric disorders in individuals. However, there are limited studies in U.S Hispanics. This study examines the APOE gene and its associations with dementia-related phenotypes, neuropsychiatric disorders, and demographic factors in U.S Hispanics.

APOE gene and its association with dementia, neuropsychiatric disorders, and demographic factors in U.S Hispanic population

A total of 1,382 Hispanic participants were collected using our own data (N=62) and data collected by Texas Alzheimer's Research and Care Consortium, TARCC (N=1,320). Questionnaires about medical history and demographics (e.g., age, education, and gender) were given. Saliva samples (N=62) and blood samples (N=1,320) were collected to obtain the APOE gene.

Our studies showed that there are associations between APOE- ϵ 4 and AD in the Hispanic population. No associations were found between APOE- ϵ 4 and MCI. Furthermore, carrying at least one copy of the APOE- ϵ 4 increases the risk of developing anxiety and depression. It was observed that AD had higher frequencies of anxiety, depression, and motor disturbances.

This study demonstrated associations of the APOE e4 allele with AD in U.S. Hispanics. Also, the APOE e4 allele was associated with anxiety, depression, and motor. Further studies are needed to confirm our current findings due to the small sample size.