DOI: 10.1002/alz.056077

PUBLIC HEALTH

POSTER PRESENTATION

Alzheimer's & Dementia®
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

Ethnicity influences risk of dementia in the UK Biobank

Bruno Bonnechère[1,2] | Jun Liu[1] | Alexander Thomson[1] | Najaf Amin[1] | Cornelia M Van Duijn[1]

[1] University of Oxford, Oxford, United Kingdom

[2] Hasselt University, Hasselt, Belgium

Correspondence
Bruno Bonnechère, University of Oxford, Oxford, United Kingdom
Email: bbonnech@ulb.ac.be

Abstract

Background: The number of people with dementia is increasing globally and it is expected that low and mid-income and minorities in high-income countries will be more severely affected in the next decades. Yet most of the research of dementia has focused on patients of European descent. Findings of US based studies suggest differences in risk across ethnic groups but data are largely lacking with Europe. The aim of this study is to compare the risk and risk factors of dementia across ethnicities in UK.

Method: We analyzed the results of the UK Biobanks (UKB), with participants aged more than 55 year to assess prospectively the risk of dementia according to the ethnicities. The data of all-cause dementia was obtained from the hospital inpatiant records available. All the previously identified genetic, medical, lifestyle and environmental risk factors were studied using Cox-regression, adjusting for age, sex and other putative confounders. 278,376 participants were included in the final analysis, among whom the vast majority are identified as White (97.79%) by UKB, followed by Asian (1.36%), and Black (0.84%). The mean duration of the follow-up was 11.2 years with 3,111,197 person-years in total.

Result: 5,029 participants developed dementia during the follow-up: the incidence of dementia is 160 cases/100,000 person-years in White, 178 cases/100,000 person-years in Asian, and 274/100,000 person-years in Black. After adjusting for risk factors, participants identified as Black in the UKB are at increased risk of developing dementia (HR = 1.63 [1.22 – 2.19], $p < .002$), but not (HR = 1.14 [0.85 – 1.54], $p = .205$). This increased risk may be due to the higher proportion of APOE44 carriers in UKB Blacks (5.4%) compared to Whites (2.3%) and Asians (1.1%) but also more frequent comorbidity including head trauma and hypertension. Despite the higher prevalence of diabetes and related factors in those of Asian descent, the risk of dementia was not significantly increased.

Conclusion: In contrast to earlier US based findings, our study shows an increased risk of dementia in those of African descent living in the UK, which is partly explained by genetic risk factors and comorbidity.