

Nadel, Jeffrey, "Incidence and Risk Factors for Cognitive Impairment in Elderly, Rural Populations of Northern Costa Rica." Advisor: Dr. Diana Ulate. Colorado College. 2011. 30pp.

This study investigated incidence and dependency of risk factors for cognitive impairment as an indicator for dementia in the rural elderly of northern Costa Rica, a country with higher than average lifespan for the western hemisphere. A modified version of the Mini Mental State Exam was administered to elderly inhabitants of San Carlos de Alajuela, Costa Rica as a diagnostic exam for characterizing the incidence and severity of cognitive impairment. Subsequently, each participant took a structured interview assessing the viability of risk factors and behaviors potentially contributing to a diagnosis of cognitive impairment. Strong dependencies were found between age ($P=0.0001$), education level ($P=0.0095$), the ability to read ($P=0.0001$) and write ($P=0.0153$), frequency of reading ($P=0.0011$), use of puzzles and mind games ($P<0.0001$), vocation ($P=0.0225$), area of residence ($P<0.0001$), comorbid mental diseases ($P=0.0005$), history of stroke or brain trauma ($P=0.0104$), urinary or renal problems ($P=0.0443$), consistent cooking practices ($P=0.0262$) and number of living companions ($P=0.0299$) in susceptibility for developing cognitive impairment. High intellectual use, or lack thereof, during one's life was a predictor for cognitive status later in life. Future research should examine, longitudinally, this group of elderly after participation in an educational program, as well as characterize incidence and risk factors for cognitive impairment in an urban setting.