

Tian'anmen Square Protests. A composite score of 0-6 was calculated to count the number experienced. Cognitive function was measured through global cognition, episodic memory, working memory, processing speed, and Chinese MMSE. Linear and quantile regression were performed. Among the participants, 1908 (61.04%) were female with mean age of 75.33 (SD=8.22) years. The average number of historical events experienced was 2.36 (SD=1.44). After adjusting for covariates, every one additional historical event experience was associated with better global cognition ($b=0.26$, $SE=0.009$, $p<.01$), episodic memory ($b = 0.045$, $SE=0.012$, $p<.001$), and processing speed ($b=0.383$, $SE=0.135$, $p<.01$). Number of historical events was not significantly associated with working memory or C-MMSE. The positive relationship between historical events and some cognitive domains suggests a potential resilience effect after experiencing historical events. Future research should examine whether participants found events stressful and whether there are differential relationships to cognitive function.

EPIGENETIC PROFILES OF ALZHEIMER'S DISEASE

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Although age is highly correlated with incidence of Alzheimer's Dementia (AD), the field continues to lack a clear understanding of how either normal and/or pathological aging processes drive neurodegeneration. As such, there remains a clear lack of valid and reliable clinical biomarkers to predict that disease's future development and severity. Epigenetic age based on DNA methylation (DNAm) in brain have been shown to relate to AD neuropathology and cognitive decline. However, they were not initially designed as AD biomarkers. We hypothesized that supervised and unsupervised machine learning techniques (e.g. network analysis, clustering, and regressed-based techniques) could be used to build composite scoring variables from DNAm data that are predictive of AD progression. This work analyzes the methylation of 3 brain regions (cerebellum (CBM), prefrontal cortex (PFC), striatum (ST))—totaling 1,047 brain methylation samples. The samples contain neuropathologically confirmed AD cases and controls, and is enriched for APOE4+ carriers. Detailed subject-level information concerning cognitive measures, lifestyle choices, medications, and neuropathology at death were also considered. Based on epigenome-wide association study (EWAS), we identified a CpG in AIMP2 that is a robust predictor of AD-related phenotypes. Using network analysis, we have also identified co-methylation modules that relate to multifactorial AD phenotypes. Following validation, we intend to follow-up on the biological processes and molecular pathways associated with these epigenetic signatures. In moving forward, predictors of AD diagnosis and prognosis have major implications for early detection and treatment of this major age-related disease.

CONTEMPORARY CORE JOB FUNCTIONS OF NURSING HOME SOCIAL SERVICES DEPARTMENT IN THE UNITED STATES

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Nursing home social services departments (NH SS-Ds) are involved in a myriad of duties i.e., from care manager, patient advocate to counselor. But it is unclear how much variation there is across departments. Begging the question, what are the most common core functions of NH SS-Ds in the United States? A nationally representative cross-sectional sample of 922 NH SS-Ds completed a survey on-line or via mail. They were asked to indicate the extent their department was involved in 46 job functions. The listing of functions was inspired by the literature and pilot tested. The most common core functions would include those whereby at least 2/3s of the respondents would report "always/usually" being involved. 32 of the 46 functions were rated as "always/usually" and therefore qualified as the most common core functions. The five most common were discussing with staff the discharges of long-term as well as short-stay residents; arranging services for residents returning to the community; creating care plans; and mediating issues between residents. There were only two items whereby less than 10% of departments were "always/usually" involved – working with volunteers and helping feed residents. This survey tool successfully represented core SS-D functions as remarkable similarity across SS-Ds in the US existed. Responsibilities associated with care planning and care transitions were heavily featured, thus reflecting recent federal guidelines changes. The study's results are pertinent to researchers, educators as well as nursing home administrators for role clarification and identification of training domains.

TRAUMA THROUGH THE LIFE CYCLE IN AN IMMIGRANT POPULATION

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The majority of studies on traumatic events have focused on either children or younger adults, while traumatic events in older adults have not been sufficiently investigated. Older immigrants encountered a wide range of traumatic events across the life span, before and after immigration, in the origin and host countries. This study aims to provide a descriptive epidemiology of lifetime traumatic events in older Chinese Americans. The data were drawn from the Population Study of Chinese Elderly in Chicago (PINE) in 2017-2019, with a sample size of 3,126. Traumatic events were evaluated by natural disasters, personal and historical events. After examining the lifetime prevalence of natural disasters, we found typhoon (64.46%) has the highest prevalence, followed by earthquake (39.81%) and tornado (7.25%). In terms of personal events, death of a loved one (69.78%) was the most prevalent, followed by robbery (12.57%), physical assault (5.36%), fire (5.29%), divorce (5.16%), cancer (5.10%), falsely accused (2.15%), homeless (1.57%), sexual assault (0.99%), and imprisonment (0.74%). In addition, 18.91% of women experienced abortion and 11.25% of women experienced miscarriage. With respect to historical events, most participants experienced the Cultural Revolution (73.27%), the Great Leap Forward (62.71%), and famine (60.01%). A small proportion experienced the Japanese invasion of China (27.14%), Tiananmen Square protests (7.86%), and the Vietnam war (4.78%). In our sample, women were more likely than men to encounter traumatic life events. Further