PUBLIC HEALTH

POSTER PRESENTATIONS

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

Epidemiology / Risk and protective factors in MCI and dementia

Are life events differentially associated with dementia risk by gender?

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Abstract

Background: Gender differences in the association between life events and dementia have rarely been explored. Mixed findings exist regarding the role of gender in stress exposure, generation, and reactivity. Gender may affect the pathways through which different life events correlate with dementia risk. We hypothesized that life events would differentially associate with dementia risk by gender via both familial confounding and causal processes in a sample of older Swedish adults.

Method: We analyzed data from 885 twin families (>= 50 years; 57.81% women; $N = 1,742$) in the Swedish Adoption/Twin Study of Aging. Six life event domains were constructed from variables measuring ever-occurrence of life events through 1990 (general loss, negative child events, self-illness, family strife, negative spousal events, positive life events). Models were run separately by gender. Dementia diagnoses occurring after 1990 were made via clinical assessment and national registry linkage (15.06% diagnosed). Biometric regression models were used to evaluate confounding and quasi-causal effects of life events on dementia status.

Result: For women, the total effect of life events on dementia was detected for general loss (B = 0.19, SE = 0.06, p = .001); for men, family strife was associated with dementia (B = 0.22, SE = 0.10, p = .027). After adjusting for shared genetic and environmental factors, there were no associations between these life events and dementia, indicating little evidence for quasi-causal effects. The associations were best explained by familial confounding.

Conclusion: Gender differences were found in the association between life events and dementia such that general loss in women and family strife in men were predictors of dementia risk. Familial confounding explained these associations. Rather than attempting to minimize dementia incidence by mitigating impacts of life events, future research could examine the kinds of genotypes and environments that increase the risk of experiencing both negative life events and dementia by gender (e.g., for men, social environments inducing hostility may engender risk of both family strife and dementia). By preventing or intervening in impacts of these mechanisms, it may be possible to decrease the incidence of both negative life events and dementia.