

Association Between Occupation Type and Dementia in Older U.S. Adults

Effect Modification By Gender and Occupation Duration

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Occupation type was not associated with dementia.

The association between occupation type and dementia did not differ by gender or occupation duration.

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INTRODUCTION		METHODS	RESULTS	ADDITIONAL INFORMATION																																																																								
- Approximately two-thirds of individuals with dementia are women.⁷ - Previous studies suggest mentally stimulating occupations may contribute to cognitive reserve and better late-life cognition.^{2,10,14} - Due to historical gender differences in labor market participation, occupation may differentially affect dementia across men and women.⁴ AIMS - Examine whether the association between occupation type and dementia differed by gender. - Evaluate occupation duration as a potential effect modifier of the association between occupation type and dementia. HYPOTHESIS - We hypothesized that the association between occupation type and dementia differs by gender, with men experiencing greater cognitive benefits from certain occupation types compared to women. - We hypothesized that the association between occupation type and dementia differs by occupation duration, where individuals with longer occupation durations experience more cognitive benefits from their occupation.		- We used data from 3,180 adults aged 65+ who participated in the 2016 Harmonized Cognitive Assessment Protocol (HCAP) sub study of the Health and Retirement Study (HRS). - Occupation was categorized into 7 categories based on the participant’s longest held job: 1) manual, 2) services, 3) clerical/admin support, 4) sales, 5) professional specialty, 6) management, and 7) never worked. - Dementia status was determined using the expected a posteriori cognitive status in HCAP. - Logistic regression models were used to estimate overall and gender-specific associations between occupation and dementia. - All models were weighed using HCAP survey sampling weights and adjusted for confounding by race, ethnicity, education, marital status, number of children, childhood socioeconomic status, birth year, and born in USA. - Analyses were performed using R version 4.2.1 and Rstudio version 2022.07.1+554 and the ‘Survey’ R package.	- Compared to men, women more often never worked and more often had occupations in services, clerical support, sales, and professional specialties. - The median duration of longest held job was statistically significantly higher among men (24.0 years) compared to women (15.3 years). - The odds of dementia did not differ significantly across occupation types, both in overall analyses and gender-specific analyses (Table 1). - The sizes of the effect estimates were not statistically significantly different across occupation durations. <table><caption>Table 1. Estimates of the associations between occupation type and dementia by gender subgroups.</caption><thead><tr><th rowspan="2">Occupation Type</th><th colspan="2">Odds ratio estimate (95% Confidence interval)</th></tr><tr><th>Women</th><th>Men</th></tr></thead><tbody><tr><td>Manual</td><td>Reference</td><td>Reference</td></tr><tr><td>Services</td><td>0.86 (0.46, 1.64)</td><td>1.42 (0.45, 4.44)</td></tr><tr><td>Clerical Support</td><td>0.83 (0.40, 1.73)</td><td>1.72 (0.67, 4.40)</td></tr><tr><td>Sales</td><td>0.72 (0.34, 1.50)</td><td>0.62 (0.29, 1.33)</td></tr><tr><td>Professional Specialty</td><td>0.73 (0.44, 1.21)</td><td>0.99 (0.50, 1.98)</td></tr><tr><td>Management</td><td>0.80 (0.51, 1.24)</td><td>0.72 (0.40, 1.30)</td></tr><tr><td>Never worked</td><td>1.63 (0.69, 3.85)</td><td>2.95 (0.54, 16.0)</td></tr></tbody></table>	Occupation Type	Odds ratio estimate (95% Confidence interval)		Women	Men	Manual	Reference	Reference	Services	0.86 (0.46, 1.64)	1.42 (0.45, 4.44)	Clerical Support	0.83 (0.40, 1.73)	1.72 (0.67, 4.40)	Sales	0.72 (0.34, 1.50)	0.62 (0.29, 1.33)	Professional Specialty	0.73 (0.44, 1.21)	0.99 (0.50, 1.98)	Management	0.80 (0.51, 1.24)	0.72 (0.40, 1.30)	Never worked	1.63 (0.69, 3.85)	2.95 (0.54, 16.0)	- Odds of dementia were similar across occupational categories. - Associations between occupation type and dementia did not differ by gender. - Occupation duration did not modify the association between occupation type and dementia. - To capture the complexity of occupation as a potential risk factor for dementia, future research is needed to evaluate how life-course occupational patterns contribute to gender differences in late-life cognition. References Supplementary Materials 	<table><caption>Table 2. Characteristics of the weighted sample.</caption><thead><tr><th>Sample characteristic</th><th>Women (55.4%)</th><th>Men (44.6%)</th><th>p-value</th></tr></thead><tbody><tr><td>Dementia, %</td><td>8.5%</td><td>7.7%</td><td>0.471</td></tr><tr><td>Occupation type, %</td><td></td><td></td><td><0.001</td></tr><tr><td>Manual</td><td>10.6%</td><td>39.9%</td><td></td></tr><tr><td>Services</td><td>16.9%</td><td>6.0%</td><td></td></tr><tr><td>Clerical support</td><td>25.5%</td><td>5.5%</td><td></td></tr><tr><td>Sales</td><td>9.8%</td><td>8.1%</td><td></td></tr><tr><td>Professional specialty</td><td>20.8%</td><td>18.8%</td><td></td></tr><tr><td>Management</td><td>11.9%</td><td>19.6%</td><td></td></tr><tr><td>Never worked</td><td>4.6%</td><td>2.2%</td><td></td></tr><tr><td>Duration longest held job, median (IQR)^b</td><td>15.3 (8.8, 25.0)</td><td>24.0 (15.4, 32.0)</td><td><0.001</td></tr></tbody></table> Abbreviations: IQR, interquartile range. ^bn=3,051.	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