CCD Hot Topics 2024

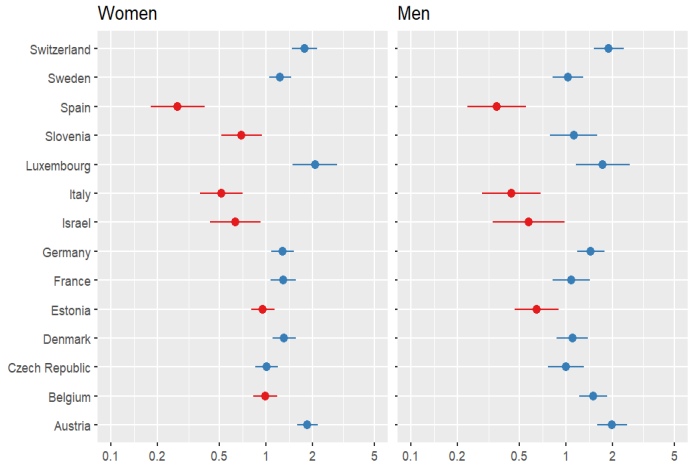
Risks and health-reinforcing factors for cognitive maintenance in men and women: a secondary analysis of the longitudinal SHARE data

Yuliya Bodryzlova, PhD,
Grégory Moullec, PhD,
École de santé publique, Université de Montréal

Background: Maintaining good or excellent cognitive functioning is a valuable outcome in aging. Exposure to factors that reinforce positive health outcomes is believed to be at least as important as avoiding risks in achieving this goal. However, no studies have yet compared their relative importance for cognitive maintenance in women and men separately.

Women and men are socialized differently, which leads to distinct roles, life chances, and life trajectories. For cognitive health, women have advantages in lifestyles, physical activity associated with household chores, and social inclusion due to their roles of kin-keepers. However, they are disadvantaged in access to power, prestige, and formal recognition.

Objective: This study aims to evaluate the relative importance of socio-demographic factors, dementia risks, and factors that reinforce cognitive health in maintaining good or excellent cognitive functioning from the age of sixty over a seven-year follow-up period.

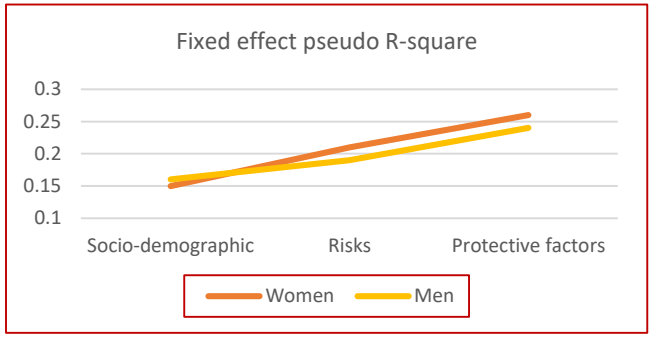


Methods: Participants from the Survey on Health, Aging, and Retirement in Europe, waves 5 and 7 (2013-2019), were included in the analyses. Cognitive maintenance was defined as recalling six or more words from a 10-word delayed recall test at both baseline and follow-up. A series of multilevel logistic regression models were constructed, with country of residence as a random effect variable.

Results: The analysis included 25,091 participants. Women showed a significantly higher probability of cognitive maintenance (14.0% vs. 7.9%). There were substantial gender differences in the predictors of cognitive maintenance, both in terms of risks and reinforcing factors. Significant predictors for both genders included age, grip strength, pain, depression, openness to experience, and leisure activities. However, factors such as physical activity, alcohol consumption, agreeableness, community engagement, and neighborhood design were significant only for women.

Parameter/subgroup	Women	Men
(Intercept)	0.02 (0.01 : 0.05)	0.03 (0.01 : 0.09)
Age	0.59 (0.55 : 0.63)	0.49 (0.44 : 0.54)
Social class: "Middle" vs “Lower”	2.45 (1.84 : 3.25)	2.09 (1.37 : 3.16)
Social class: "Higher" vs “Lower”	5.91 (4.34 : 8.06)	3.67 (2.37 : 5.68)
Risk factors		
Physical activity, any vs never	1.4 (1.02 : 1.91)	0.97 (0.63 : 1.5)
Alcohol, Daily or almost daily vs never	1.31 (1.11 : 1.54)	0.98 (0.8 : 1.2)
Alcohol, twice a week vs never	1.27 (1.11 : 1.45)	1 (0.82 : 1.21)
Grip strength: Over normal vs normal	1.26 (1.12 : 1.42)	1.26 (1.07 : 1.48)
Pain: Moderate or Severe vs no pain	0.84 (0.73 : 0.97)	0.85 (0.68 : 1.05)
Depression, EURO-D score	0.88 (0.82 : 0.94)	0.84 (0.75 : 0.93)
Protective factors		
Agreeableness, high score	0.66 (0.55 : 0.8)	0.76 (0.57 : 1.02)
Openness, high score	1.46 (1.24 : 1.72)	1.4 (1.08 : 1.8)
Self-improuvent activités, nb.	1.41 (1.32 : 1.5)	1.49 (1.37 : 1.62)
Community activities, nb.	1.07 (1.01 : 1.14)	1.06 (0.98 : 1.14)
Easy vs not access to health facility asy	1.19 (1.06 : 1.34)	0.99 (0.85 : 1.16)

The final model explained 32% and 30% of the variability in cognitive maintenance in women and men. In women, protective factors explained the same amount of variability as risk factors, while in men, they explained a little bit more than risks.



Social class emerged as the most important predictor of cognitive maintenance in both genders, with a steeper gradient observed in women (OR for "higher" vs. "lower" class, fully adjusted model: 5.91 [4.34:8.06] in women and 3.67 [2.37:5.68] in men).