

Background

An individual's main lifetime occupation may influence how mentally, physically, and socially stimulated they are for a majority of their working day. Mental occupational demands are associated with better late life cognitive functioning^{1,2}. Less is known about physical or social occupational demands.

Men and women experience different work environments in the same occupation³. This may pose a moderating role of gender.

Research Aims

Aim 1: To identify whether mental, physical and/or social occupational demands impact late life cognitive functioning.

Aim 2: To examine whether the relationships between occupational demands and late life cognitive functioning differ by gender.

Methods

Participants from the Michigan Cognitive Aging Project (MCAP; $n=199$, $M_{age}=63.91$, 55% female, 45% African American, $M_{education}=13.92$) were used.

Occupational Demands. Self-reported longest-held occupation. Data linked to O*NET occupational classification system measuring levels of mental, physical, and social occupational demands.

Gender. Self-reported gender with males as the reference group.

Cognition. Composite scores of:

- **Episodic memory (EM):** composite score of CERAD, Craft Story 21, Benson Complex Figure
- **Global cognition (GC):** all EM tests, letter and category fluency, Color Trails I & II, Stroop, MINT, JoLO, MoCA

Covariates. Education, income, childhood socioeconomic status, age, race, ethnicity, and physical health.

Analytic Strategy. Multiple linear regressions conducted in SPSS with separate models for episodic memory and global cognition. Secondary models then run with added gender interactions.

Results

Aim 1 – Main effects of occupational demands

- Higher mental demands are significantly associated with better episodic memory and global cognition later in life.
- **Figures 1 and 2** show the main effect of mental occupational demands on EM and GC, respectively, accounting for covariates.

Aim 2 – Gender Moderation

- Women evidenced less physical and social demands than men; no gender difference in mental demands.
- **Table 1** shows results from the multiple linear regression with added gender interactions.
- No significant variation between men and women in the association of occupational demands EM or GC.

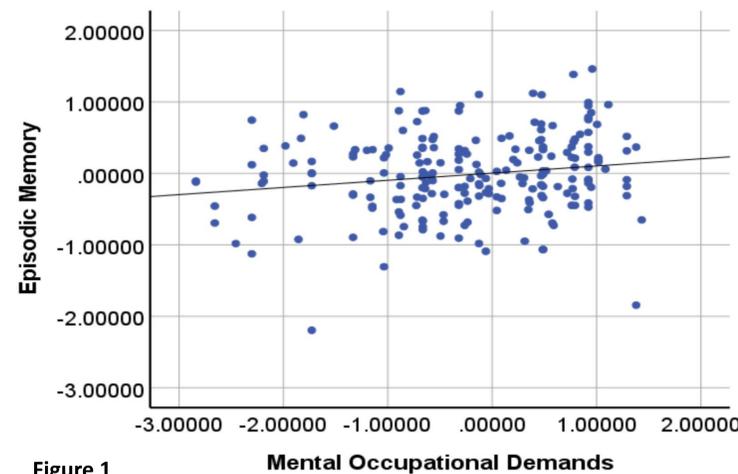


Figure 1

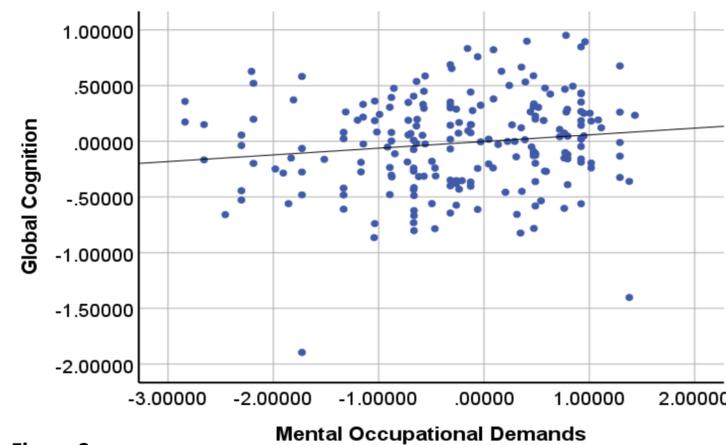


Figure 2

Variable	Episodic Memory			Global Cognition		
	B	SE B	β	B	SE B	β
Age	.00	.02	.01	.01	.01	.03
Female	.28	.09	.02**	-.01	.07	-.01
African American	-.38	.10	-.30***	-.47	.07	-.43***
MENA	.00	.19	.00	-.10	.15	-.04
Other	.06	.19	.02	-.19	.14	-.08
Education	.03	.02	-.03	.03	.02	-.03
Parental Education	.00	.01	-.01			
Income	.00	.01	.02	.00	.00	.05
Health	-.01	.02	-.03	-.01	.02	.14
Mental	.24	.08	.37**	.11	.06	.02
Physical	.01	.09	.02	.01	.07	-.01
Social	.03	.08	.04	.03	.06	.06
Mental x Female	-.17	.10	-.18	-.04	.08	-.05
Physical x Female	-.08	.12	-.08	-.07	.09	-.09
Social x Female	.00	.13	.00	-.07	.10	-.07
R ²	.29	.56		.43	.42	

Table 1

Conclusions and Limitations

Mentally stimulating occupations best preserve late life cognition. Results are still inconclusive regarding physically and socially stimulating occupations. Potentially protective effects may be offset by negative effects:

- Physically stimulating occupations can pose physical hazards⁴.
- Socially stimulating occupations may include emotional burnout⁵.

Gender difference in cognition may more strongly reflect gender difference in the types of occupations individuals hold, due in part to gender discrimination.

Strengths include community-based sample and consideration of multiple occupational characteristics. Limitations include a small sample and cross-sectional design.

References.

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