The Interrelationship between Working Status and Social Networks and Its Association with Cognitive Functioning of Older Adults.

Thomas Arnhold12, Daniela Weber12, Valeria Bordone13

Wittgenstein Centre, International Institute for Applied Systems Analysis (IIASA)1, Vienna University of Economics and Business (WU)2, University of Vienna3

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Empirical results

Episodic memory
- Positive effect of social network resources
- Negative effect: unemployed, homemaker
- Effect of being retired is negative for individuals with SN Scale ≤ 3 and positive otherwise.
- Positive interaction between not working and social network resources

Verbal fluency
- Positive effect of social network resources
- Negative effect: unemployed, homemaker

Controls: gender, age, educational attainment, partnership status, financial wealth, financial distress, mobility limitations, ADL limitations, and cognitive deterioration

Tab. 1 – multilevel regression coefficients and standard errors.

<table>
<thead>
<tr>
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<th>Quidi Memory</th>
<th>Verbal Fluency</th>
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<tbody>
<tr>
<td>SN Scale=0</td>
<td>0.049***</td>
<td>0.019</td>
</tr>
<tr>
<td>Unemployed</td>
<td>−0.056**</td>
<td>0.027</td>
</tr>
<tr>
<td>Homemaker</td>
<td>−0.252***</td>
<td>0.038</td>
</tr>
<tr>
<td>Interaction</td>
<td>−0.021</td>
<td>0.010</td>
</tr>
<tr>
<td>Unemployed × SN</td>
<td>0.033</td>
<td>0.027</td>
</tr>
<tr>
<td>Homemaker × SN</td>
<td>0.042</td>
<td>0.017</td>
</tr>
</tbody>
</table>

Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

Fig. 3 – predicted episodic memory by employment status: weak vs. strong social network (90% CI).

Next steps: Considering work histories, physical/intellectual demand, industry of employment.

Background and Research Question

The preservation of cognitive functioning is a central aspect of older peoples’ health and well-being. A crucial ingredient for good cognitive functioning at an advanced age is cognitive stimulation through engagement with life, which includes the maintenance of a strong social network and participation in productive activities.

- Employment: a productive activity that is a central source of cognitive stimulation for workers.
- A strong social network can be an important substitute for engaging in productive activities.

Do social network resources compensate for the absence of cognitive stimulation through employment for non-working older individuals?


Sample: people aged 50+, residing in 17 European countries (N=49,733).

Methodology

Linear multilevel model with a random intercept
- Individuals as level 1 and countries as level 2

Outcome variables:
- Episodic memory (sum of scores in two word recall tests)
- Verbal fluency (animal naming test score)

Covariates:
- Social Network Scale (SN scale): composite score, range: 0-4
- Employment status
- Interaction term

Descriptive results

Fig. 1 – episodic memory by social network scale and employment status.

Fig. 2 – verbal fluency by social network scale and employment status.

Episodic memory
- Estimated gradient for episodic memory
  - Strong Social Network (SN Scale=4)
  - Weak Social Network (SN Scale=0)

- Unemployed
  - −0.83 words
  - −0.06 words

- Homemaker
  - −0.93 words
  - −0.31 words

- Retired
  - −0.21 words
  - +0.16 words

- Estimated gradient for verbal fluency
  - Strong Social Network (SN Scale=4)
  - Weak Social Network (SN Scale=0)

- Unemployed
  - +0.13 words
  - −0.08 words

- Homemaker
  - −0.05 words
  - −0.36 words

- Retired
  - +0.10 words
  - +0.16 words

Conclusions

- Significant importance of a strong social network for cognitive functioning
- Particularly for the episodic memory of non-workers
- For individuals with a strong social network, employment status predicted importance for episodic memory decreases dramatically.