The Impact of Voluntary & Involuntary Retirement on Mental Health: Evidence from Older Irish Adults

Irene Mosca and Alan Barrett
Motivation

• Postponement of retirement to counteract effects of population ageing

• Larger tax base

• Pension benefits paid later in life

• But what about individual wellbeing?
Motivation

- A priori, retirement can affect mental health:

  - **Negatively** if perceived as:
    - stressful event
    - loss of identity
    - loss of income

  - **Positively** if:
    - relief from job-related stress
    - satisfaction derived from many sources throughout life
Literature Review

- Association between retirement & mental health generally negative

- But few studies have attempted to identify causal effects

- Difficult because:
  - Unobserved heterogeneity
    - Unobservables correlated with retirement and mental health
  - Reverse causation
    - Poor mental health after retirement might be the cause, not the effect, of retirement
• Empirical papers have used different strategies:
  – Fixed effect models (Mandal & Roe 2008; Dave et al. 2008; Latif 2013; Charles 2002)
  – Two-stage least square estimation (Charles 2002, Mandal & Roe 2008; Latif 2013; Neuman 2008; Coe & Zamarro 2011)
  – Non-parametric estimators (Behncke 2012)
  – Regression discontinuity design (Johnston & Lee 2009)

• Results are mixed:
  – Negative effect (Mandal & Roe 2008; Dave et al. 2008)
  – Positive effect (Mandal & Roe 2008; Charles 2002; Johnston & Lee 2009)
  – No effect (Coe & Zamarro 2011; Behncke 2012)
Methodology

- We run 2 models where reference category = continuously employed

- Model 1:
  - continuously employed
  - vs retired

- Model 2:
  - continuously employed
  - vs retired voluntarily
  - vs retired involuntarily
  - vs retired due to own ill health
Methodology

**DEPENDENT VARIABLE**

- Change in depression score (CESD)
  - CESD score at Wave 2 – CESD score at Wave 1 (e.g. 15-10=5)

**INDEPENDENT VARIABLES**

- Demographic/social changes
  - Death of child/spouse/parent; loss of close friends or relatives; stopped participating in a group
- Economic changes
  - Retirement; changes in income
- Physical health changes
  - Onset of cardiovascular disorder; onset of chronic illness
  - Loss of functional capacity
  - Deterioration in self-reported physical health
  - Deterioration in self-reported vision
The sample

2,373 individuals in employment at W1

90% still employed at W2

10% have retired, due to:
- Involuntary exit (N=30)
- Own ill health (N=22)
- Voluntary exit (N=192)

Retirees are on average 5 years older than those still at work (average age: 61.7 years vs 56.6 years)
### Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Continuously employed</th>
<th>Fully retired</th>
<th>Retired due to ill health</th>
<th>Retired involuntarily</th>
<th>Retired voluntarily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ in CES-D score, mean</td>
<td>-0.378</td>
<td>0.783**</td>
<td>3.041**</td>
<td>1.854*</td>
<td>0.328*</td>
</tr>
<tr>
<td>N</td>
<td>2,129</td>
<td>244</td>
<td>22</td>
<td>30</td>
<td>192</td>
</tr>
</tbody>
</table>

***1%; **5%; *10%
## Descriptive Statistics

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Continuously employed</th>
<th>Fully retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss in functional capacity (new ADL)</td>
<td>0.008</td>
<td>0.026*</td>
</tr>
<tr>
<td>Onset of hypertension/high chol/diabetes</td>
<td>0.134</td>
<td>0.190**</td>
</tr>
<tr>
<td>Onset of chronic illness</td>
<td>0.175</td>
<td>0.258*</td>
</tr>
<tr>
<td>Income has decreased</td>
<td>0.407</td>
<td>0.693***</td>
</tr>
<tr>
<td>Income has increased/stayed the same</td>
<td>0.461</td>
<td>0.142***</td>
</tr>
</tbody>
</table>

***1%; **5%; *10%
Regression results: coefficients

Model 1
- M1: retired
- M2: own ill health

Reference: continuously employed

Model 2
- M2: involuntary retirement
- M2: voluntary retirement

Reference: continuously employed

** p<0.05
*** p<0.01
<table>
<thead>
<tr>
<th>Activity</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuously employed</td>
<td>Ref.</td>
<td>Ref.</td>
</tr>
<tr>
<td>Fully retired</td>
<td>1.05**</td>
<td>--</td>
</tr>
<tr>
<td>Retired involuntarily</td>
<td>--</td>
<td>2.21*</td>
</tr>
<tr>
<td>Retired due to own ill health</td>
<td>--</td>
<td>2.58*</td>
</tr>
<tr>
<td>Retired voluntarily</td>
<td>--</td>
<td>0.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death of child/spouse/parent</td>
<td>1.69**</td>
<td>1.68**</td>
</tr>
<tr>
<td>Loss in functional capacity (new IADL)</td>
<td>3.63*</td>
<td>3.51*</td>
</tr>
<tr>
<td>1 point deterioration in SR health</td>
<td>0.78**</td>
<td>0.78**</td>
</tr>
<tr>
<td>2+ point deterioration in SR health</td>
<td>1.60*</td>
<td>1.58**</td>
</tr>
<tr>
<td>Deterioration in SR vision</td>
<td>0.60**</td>
<td>0.62**</td>
</tr>
</tbody>
</table>

***1%; **5%; *10%
Conclusions

• We investigated effects of retirement on mental health and found that reason for retirement is important

• Negative effect of retirement for those who retired involuntarily or due to ill health

• No effect for those who retired voluntarily

• Findings particular important in the current economic context

• Important to note that this is a short-run effect. Impact might change in medium to long-run