Impact of interventions and policies on prolonging working life in good health: an international study

(WORKLONG)

Merel Schuring
Department of Public Health, Erasmus MC, Rotterdam, The Netherlands
## Consortium WORKLONG

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
<th>Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Public Health</td>
<td>The Netherlands</td>
<td>Prof. Alex Burdorf</td>
</tr>
<tr>
<td>Erasmus University Medical Center</td>
<td></td>
<td>Merel Schuring, PhD</td>
</tr>
<tr>
<td>Rotterdam,</td>
<td></td>
<td>Suzan Robroek, PhD</td>
</tr>
<tr>
<td>Department of Social Science</td>
<td>United Kingdom</td>
<td>Mauricio Avendano, PhD</td>
</tr>
<tr>
<td>Health and Medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>King’s College Londen, United Kingdom</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Public Health and Clinical Medicine,</td>
<td>Sweden</td>
<td>Prof. Bengt Järvholm</td>
</tr>
<tr>
<td>Umeå University</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WORKLONG – objectives

To study:

1. The influence of legislation on different pathways out of the labour force (WP1)

2. The impact of workplace and lifestyle interventions on working life duration (WP2)

3. The impact of pension reforms on health before and after retirement (WP3 & WP4)

4. Cost-effectiveness and cost-benefit analysis of interventions and programmes that support workers with chronic diseases in the labour market (WP5)
WORKLONG – objectives

To study:

1. The influence of legislation on different pathways out of the labour force (WP1)

2. The impact of workplace and lifestyle interventions on working life duration (WP2)

3. The impact of pension reforms on health before and after retirement (WP3 & WP4)

4. Cost-effectiveness and cost-benefit analysis of interventions and programmes that support workers with chronic diseases in the labour market (WP5)
Different pathways out of the labour force

Labour force exit of workers with ill health

- Unemployment
- Disability
- Early retirement

The effect of ill health and socioeconomic status on labor force exit and re-employment: a prospective study with ten years follow-up in the Netherlands

by Merel Schuring, PhD, Suzan JW Robroek, PhD, Ferdy WJ Otten, PhD, Coos H Arts, MSc, Alex Burdorf, PhD

Influence of legislation on different pathways to out of the labour force

- Pension reforms: increase of statutory retirement age
- Labour force participation and pathways out of the labour force
- Workers with health problems
WORKLONG – objectives

To study:

1. The influence of legislation on different pathways out of the labour force (WP1)

2. The impact of workplace and lifestyle interventions on working life duration (WP2)

3. The impact of pension reforms on health before and after retirement (WP3 & WP4)

4. Cost-effectiveness and cost-benefit analysis of interventions and programmes that support workers with chronic diseases in the labour market (WP5)
Educational inequalities in lost working years

Distribution of lost working years for men, starting age at 25

Low educated workers: more working years lost due to disability, unemployment, economic inactivity

Data source: Statistics Netherlands; 2,000,000 persons, tax register 8 yrs
Lifestyle and work conditions & pathways out of employment

<table>
<thead>
<tr>
<th></th>
<th>Disability benefits (n = 388/14708) SHR (95%CI)</th>
<th>Unemployment (n = 1231/14708) SHR (95%CI)</th>
<th>Early retirement (n = 922/2922) SHR (95%CI)</th>
<th>Economic inactivity (n = 2321/14708) SHR (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>high</td>
<td>1.0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>moderate</td>
<td>1.16 (0.89–1.51)</td>
<td>1.15 (0.99–1.33)</td>
<td>0.94 (0.80–1.10)</td>
<td>1.20 (1.08–1.33)</td>
</tr>
<tr>
<td>low</td>
<td>1.84 (1.40–2.42)</td>
<td>1.74 (1.49–2.03)</td>
<td>0.92 (0.78–1.09)</td>
<td>1.53 (1.36–1.71)</td>
</tr>
<tr>
<td><strong>Health status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>poor</td>
<td>6.45 (5.26–7.90)</td>
<td>1.76 (1.53–2.02)</td>
<td>0.97 (0.82–1.14)</td>
<td>0.88 (0.78–1.00)</td>
</tr>
<tr>
<td>moderate</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Lifestyle-related factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>smoking</td>
<td>1.42 (1.16–1.74)</td>
<td>1.48 (1.32–1.66)</td>
<td>0.77 (0.67–0.89)</td>
<td>1.30 (1.20–1.42)</td>
</tr>
<tr>
<td>heavy alcohol intake</td>
<td>0.85 (0.60–1.19)</td>
<td>1.12 (0.94–1.34)</td>
<td>0.99 (0.82–1.20)</td>
<td>1.06 (0.92–1.21)</td>
</tr>
<tr>
<td>&lt;1h/week sports</td>
<td>1.64 (1.34–2.01)</td>
<td>1.21 (1.08–1.35)</td>
<td>0.90 (0.79–1.03)</td>
<td>1.12 (1.03–1.22)</td>
</tr>
<tr>
<td>BMI underweight</td>
<td>2.40 (1.31–4.41)</td>
<td>1.42 (0.98–2.07)</td>
<td>1.18 (0.51–2.72)</td>
<td>1.49 (1.16–1.91)</td>
</tr>
<tr>
<td>normal weight</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>overweight</td>
<td>1.44 (1.15–1.79)</td>
<td>0.97 (0.85–1.11)</td>
<td>1.09 (0.95–1.25)</td>
<td>0.92 (0.84–1.02)</td>
</tr>
<tr>
<td>obese</td>
<td>1.22 (0.85–1.74)</td>
<td>1.22 (1.00–1.49)</td>
<td>1.11 (0.90–1.38)</td>
<td>1.01 (0.86–1.18)</td>
</tr>
<tr>
<td><strong>Work characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>job demands high</td>
<td>0.91 (0.73–1.14)</td>
<td>0.84 (0.74–0.95)</td>
<td>1.06 (0.92–1.22)</td>
<td>0.96 (0.87–1.05)</td>
</tr>
<tr>
<td>job control low</td>
<td>1.34 (1.08–1.65)</td>
<td>1.20 (1.07–1.36)</td>
<td>1.15 (1.00–1.32)</td>
<td>1.04 (0.95–1.13)</td>
</tr>
<tr>
<td>rewards low</td>
<td>1.51 (1.19–1.91)</td>
<td>1.14 (0.99–1.31)</td>
<td>0.90 (0.75–1.08)</td>
<td>1.09 (0.98–1.21)</td>
</tr>
<tr>
<td>physical job demands high</td>
<td>1.36 (1.10–1.69)</td>
<td>1.01 (0.89–1.15)</td>
<td>1.01 (0.87–1.17)</td>
<td>1.08 (0.98–1.18)</td>
</tr>
</tbody>
</table>

Educational differences in exit from paid employment, are partly mediated by health, lifestyle and work characteristics.
Impact of workplace and lifestyle interventions on working life expectancy

- working life expectancy (WLE)
- loss of working years due to health problems
- gains in working life expectancy due to health interventions
- differences between socioeconomic groups
WORKLONG – objectives

To study:

1. The influence of legislation on different pathways out of the labour force (WP1)
2. The impact of workplace and lifestyle interventions on working life duration (WP2)
3. The impact of pension reforms on health before and after retirement (WP3 & WP4)
4. Cost-effectiveness and cost-benefit analysis of interventions and programmes that support workers with chronic diseases in the labour market (WP5)
Health trajectories before and after employment transitions

Becoming unemployed
- increased likelihood of self-rated poor health

Early retirement
- seemed beneficial for self-rated health

Scand J Work Environ Health 2015;41(5):441-450
doi:10.5271/sjweh.3514

Educational differences in trajectories of self-rated health before, during, and after entering or leaving paid employment in the European workforce
by Schuring M, Robroek SJW, Lingsma HF, Burdorf A
Educational differences in trajectories before and after retirement

Low-educated workers:
- ill-health prompted early retirement
- Retirement seemed to prevent further deterioration of health

Higher educated workers:
- early retirement had an adverse effect on self-rated health.

Figuur: Trends in matige tot slechte ervaren gezondheid van mensen voor en na vervroegd pensioen naar opleidingsniveau, gecorrigeerd voor leeftijd, geslacht en Europese regio.
Worklong – Work Packages 3 & 4

Impact of pension reforms on health before and after retirement

- Increase of retirement age
- Health trajectories before and after retirement
- Morbidity and mortality
- Differences between socioeconomic groups
WORKLONG – objectives

To study:

1. The influence of legislation on different pathways out of the labour force (WP1)

2. The impact of workplace and lifestyle interventions on working life duration (WP2)

3. The impact of pension reforms on health before and after retirement (WP3 & WP4)

4. Cost-effectiveness and cost-benefit analysis of interventions and programmes that support workers with chronic diseases in the labour market (WP5)
WORKLONG – planning

Management and coordination

Objectives 1 and 2:
- Influence of legislation, policies, and provisions on different pathways to retirement (WP1)
- Impact of interventions and policy measures on prolonging working life and improving health before and after retirement (WP3)

Objectives 3 and 4:
- Influence of workplace & lifestyle interventions and policies & provisions on working life duration (WP2)
- Impact of timing of exit from labour market on morbidity and mortality (WP4)
- Cost-effectiveness and cost-benefit of interventions and programmes that support workers with chronic disease in the labour market (WP5)

Continuous dissemination of knowledge and tools and stakeholder involvement
Merel Schuring, PhD  
**Contact:** m.schuring@erasmusmc.nl

Department of Public Health  
Erasmus MC, Rotterdam, the Netherlands