Gender or Country? Analysing Determinants of Daily Time-Use and Psychosocial Health in Italy and Norway

Laura Altweck*, Lina Schröder*, Silke Schmidt & Samuel Tomczyk
Institute of Psychology, Department Health and Prevention,
University of Greifswald, Germany
Background: time use

How do people spend their time?

Averages of minutes per day from time-use diaries for people between 15 and 64.

<table>
<thead>
<tr>
<th>Country</th>
<th>Paid work</th>
<th>Sleep</th>
<th>Other unpaid work</th>
<th>Personal care</th>
<th>Eating &amp; drinking</th>
<th>Total leisure</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>335 mins</td>
<td>56</td>
<td>123</td>
<td>52</td>
<td>100</td>
<td>228 mins</td>
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<td>Mexico</td>
<td>302 mins</td>
<td>84</td>
<td>202</td>
<td>58</td>
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<td>172 mins</td>
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<td>South Korea</td>
<td>288 mins</td>
<td>70</td>
<td>89</td>
<td>90</td>
<td>117</td>
<td>258 mins</td>
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<tr>
<td>Austria</td>
<td>280 mins</td>
<td>65</td>
<td>145</td>
<td>79</td>
<td>109</td>
<td>292 mins</td>
</tr>
<tr>
<td>India</td>
<td>272 mins</td>
<td>44</td>
<td>160</td>
<td>79</td>
<td>84</td>
<td>253 mins</td>
</tr>
<tr>
<td>Canada</td>
<td>269 mins</td>
<td>81</td>
<td>139</td>
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<td>65</td>
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<tr>
<td>Portugal</td>
<td>259 mins</td>
<td>52</td>
<td>176</td>
<td>58</td>
<td>112</td>
<td>241 mins</td>
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<tr>
<td>USA</td>
<td>251 mins</td>
<td>96</td>
<td>122</td>
<td>57</td>
<td>63</td>
<td>292 mins</td>
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<tr>
<td>New Zealand</td>
<td>241 mins</td>
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<td>134</td>
<td>32</td>
<td>80</td>
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<tr>
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<td>42</td>
<td>75</td>
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<tr>
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<td>229 mins</td>
<td>77</td>
<td>160</td>
<td>57</td>
<td>91</td>
<td>286 mins</td>
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<td>Germany</td>
<td>224 mins</td>
<td>71</td>
<td>141</td>
<td>95</td>
<td>118</td>
<td>311 mins</td>
</tr>
<tr>
<td>Netherlands</td>
<td>218 mins</td>
<td>68</td>
<td>133</td>
<td>68</td>
<td>114</td>
<td>316 mins</td>
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<tr>
<td>Turkey</td>
<td>217 mins</td>
<td>88</td>
<td>138</td>
<td>50</td>
<td>118</td>
<td>286 mins</td>
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<tr>
<td>Norway</td>
<td>201 mins</td>
<td>100</td>
<td>103</td>
<td>56</td>
<td>79</td>
<td>369 mins</td>
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<tr>
<td>Denmark</td>
<td>200 mins</td>
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<td>52</td>
<td>119</td>
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<tr>
<td>Finland</td>
<td>200 mins</td>
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<td>136</td>
<td>52</td>
<td>81</td>
<td>331 mins</td>
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<tr>
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<td>149</td>
<td>53</td>
<td>99</td>
<td>339 mins</td>
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<tr>
<td>Greece</td>
<td>187 mins</td>
<td>45</td>
<td>141</td>
<td>97</td>
<td>128</td>
<td>341 mins</td>
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<tr>
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<td>176 mins</td>
<td>89</td>
<td>141</td>
<td>51</td>
<td>126</td>
<td>316 mins</td>
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<tr>
<td>France</td>
<td>170 mins</td>
<td>89</td>
<td>151</td>
<td>107</td>
<td>133</td>
<td>293 mins</td>
</tr>
<tr>
<td>Italy</td>
<td>149 mins</td>
<td>70</td>
<td>142</td>
<td>68</td>
<td>127</td>
<td>323 mins</td>
</tr>
</tbody>
</table>

Data sources: OECD Time Use Database, Gender Data Portal. For most countries surveys were conducted between 2009 and 2016, but surveys for some countries are older.

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Background: time use

(Gershuny, 2018)
Background: time use

- Long working hours related to psychosomatic health complaints (Müller et al., 2018), onset of depression (Virtanen et al., 2018), and poor self-rated health (Cho et al., 2018)
- Women are more likely to care for friends or family, and be responsible for household chores (Bhan et al., 2020; Tabler & Geist, 2021)

➢ Time-use comparisons enable the development of targeted health policy interventions for individuals (Gimenez-Nadal & Molina, 2015; Bauman et al., 2019)
Background: time-use patterns

Eight different latent classes of daily time use (American time-use data):

- **a** committed time
- **b** free time
- **c** “standard” hour contracted time
- **d** “early” contracted time
- **e** long hour contracted time
- **f** early day short hour contracted time
- **g** late day short hour contracted time
- **h** night hours contracted time

- less contracted time (e.g., paid work) in women and elderly people
- more committed time (e.g., household chores) in parents

(Flood et al., 2018)
Background: time-use patterns

- six time-use profiles in the German population (SOEP data)
- compared to ‘full-time work’, the latent profiles ‘childcare’ and ‘informal care’ were related to lower wellbeing
- ‘part-time work’ was related to better wellbeing (mainly women)

(Tomczyk et al., 2021)
Background: gender gap

• Time use varies between men and women depending on the context (Anxo et al., 2011)

→ family and working policies as well as social norms shape gendered time use
  – Scandinavian countries (e.g., Sweden) policies actively promote gender equality (e.g., parental leave)
  – Compared to Scandinavian countries, Southern and Eastern European countries more traditional gender beliefs (Stavrova et al., 2011)
Research questions

1. Determine patterns of daily time use in working age Italian and Norwegian men and women.

2. Examine associations of the time-use clusters with sociodemographic and psychosocial health parameters.
Methods

Data:

Italian and Norwegian data from the *Harmonised European Time Use Surveys (HETUS)* (2008-2015)

- Italian women: $N=13,134$
- Italian men: $N=12,536$
- Norwegian women: $N=2,922$
- Norwegian men: $N=2,633$
Methods

Measures: (diary data)

- Activities common daytime
  - ca. 80 codes → 8 categories
    1. personal care
    2. paid work
    3. studying
    4. housework
    5. childcare
    6. unpaid adult care
    7. sports and outdoor activities
    8. leisure and socializing
  - **7:00-21:00** (we examined states every half an hour, i.e., at XX:10 and XX:40)
Methods

Measures: (individual & household questionnaires)

- **Sociodemographic background**
  - **age group** (18-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64)
  - **sex** (man, woman)
  - **marital status** (married, not married)
  - **number of children** in household (0, 1, 2+)
  - **employment status** (full-time, part-time, not employed, other)

- **Psychosocial health parameters**
  - **self-perceived general health** (good, fair, bad)
  - **stress** (always, sometimes, almost never feel rushed)
Methods: statistical analyses

1. Sequence analysis (Gauthier et al., 2010; Pollock, 2007) and ward cluster analysis (Ward, 1963) stratified by gender and country

2. Chi-square post hoc-tests with Bonferroni correction to determine associations between cluster membership and other parameters
## Results: time-use clusters

<table>
<thead>
<tr>
<th></th>
<th>Norwegian women</th>
<th>Norwegian men</th>
<th>Italian women</th>
<th>Italian men</th>
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</thead>
<tbody>
<tr>
<td><strong>Employment</strong></td>
<td><img src="image1" alt="Graph" /></td>
<td><img src="image2" alt="Graph" /></td>
<td><img src="image3" alt="Graph" /></td>
<td><img src="image4" alt="Graph" /></td>
</tr>
</tbody>
</table>

- **Personal care**
- **Adult care**
- **Missing**
- **Employment**
- **Study**
- **Leisure and free time**
- **Household**
- **Childcare**
- **Sports and outdoor activities**
### Results: time-use clusters

**leisure & free time**

<table>
<thead>
<tr>
<th>Leisure and free time</th>
<th>Norwegian women</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Personal care</td>
<td><img src="#" alt="Norwegian women C1" /></td>
<td><img src="#" alt="Norwegian men C1" /></td>
<td><img src="#" alt="Italian women C4" /></td>
<td><img src="#" alt="Italian men C3" /></td>
</tr>
<tr>
<td>Adult care</td>
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<tr>
<td>Missing</td>
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<td><img src="#" alt="Italian women C4" /></td>
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<tr>
<td>Study</td>
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<td>Household</td>
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<td>Childcare</td>
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<td><img src="#" alt="Italian men C3" /></td>
</tr>
<tr>
<td>Sports and outdoor activities</td>
<td><img src="#" alt="Norwegian women C1" /></td>
<td><img src="#" alt="Norwegian men C1" /></td>
<td><img src="#" alt="Italian women C4" /></td>
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Altweck et al.  8th European User Conference for EU-Microdata  16.03.2023
# Results: time-use clusters

<table>
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<tbody>
<tr>
<td><strong>Household</strong></td>
<td><img src="chart1" alt="Chart" /></td>
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<td><img src="chart3" alt="Chart" /></td>
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</tr>
</tbody>
</table>

**Legend:**
- Personal care
- Employment
- Study
- Household
- Childcare
- Adult care
- Leisure and free time
- Sports and outdoor activities
- Missing
**Results: time-use clusters**

**household & childcare**

<table>
<thead>
<tr>
<th></th>
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<tr>
<td><strong>Household</strong></td>
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<tr>
<td><strong>Childcare</strong></td>
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<tr>
<td></td>
<td>![Cluster C4] 250 (8.56)</td>
<td></td>
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</tr>
</tbody>
</table>

**Men**
- Less
- Household > (child)care

Legend:
- **Personal care**
- **Employment**
- **Study**
- **Household**
- **Childcare**
- **Leisure and free time**
- **Sports and outdoor activities**
- **Missing**
## Results: time-use clusters

### household & childcare

<table>
<thead>
<tr>
<th></th>
<th>Norwegian women</th>
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<tbody>
<tr>
<td><strong>Household</strong></td>
<td>![Image]</td>
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<tr>
<td><strong>Childcare</strong></td>
<td>![Image]</td>
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- **Personal care**
- **Employment**
- **Study**
- **Household**
- **Childcare**
- **Leisure and free time**
- **Sports and outdoor activities**
- **Adult care**
- **Missing**
## Results: Time-use Clusters

<table>
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<th>Norwegian women</th>
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<tr>
<td>Studying</td>
<td>![Chart]</td>
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<td>![Chart]</td>
</tr>
</tbody>
</table>

- **Personal care**
- **Employment**
- **Study**
- **Household**
- **Childcare**
- **Leisure and free time**
- **Sports and outdoor activities**
Results: associations with socioeconomic background

- youngest (60-70% between 18-24 years)
- least likely to be married and have children
Results: associations with socioeconomic background

- most likely to be between 20-30 years old
- most likely to work full-time
  - only Italian women worked full- or part-time
- ‘working’ Italian women, were less likely to have children but ‘working’ Italian men more likely to have children
- this pattern was not seen in the Norwegian sample
Results: associations with socioeconomic background

- high full-time employment in Norwegians and Italian men
- also, highest unemployment and other type of employment (25-30%: Norwegians and Italian men, 40%: Italian women)
### Results: associations with socioeconomic background

<table>
<thead>
<tr>
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<td>Household</td>
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<td>Childcare</td>
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</tbody>
</table>

- high employment rates in men, Norwegian women showed most part-time employment

![Graph showing employment rates](image_url)
Results: associations with psychosocial health

- Studying

<table>
<thead>
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</thead>
<tbody>
<tr>
<td></td>
<td>C2 140 (4.79)</td>
<td>C4 93 (3.53)</td>
<td>C1 441 (5.36)</td>
<td>C4 517 (4.12)</td>
</tr>
</tbody>
</table>

- showed the best self-perceived general health
Results: associations with psychosocial health

- (after the studying clusters) second best self-perceived general health
  (only Italian women did not report high SRH)
- Italians most likely to report feeling stressed
# Results: associations with psychosocial health

<table>
<thead>
<tr>
<th></th>
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<th>Italian men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure and free time</td>
<td>C1 632 (24.00)</td>
<td>C1 1,040 (35.59)</td>
<td>C4 3,212 (24.46)</td>
<td>C3 3,124 (24.92)</td>
</tr>
</tbody>
</table>

- Italian men and Norwegians lowest self-perceived general health
- but Norwegians also least stressed
## Results: associations with psychosocial health

<table>
<thead>
<tr>
<th>Household</th>
<th>Norwegian women</th>
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<th>Italian men</th>
</tr>
</thead>
</table>

| Childcare       | C4 250 (8.56)   |               |              |             |

- (except Italian men) also lowest self-perceived general health
Discussion

• Time-use patterns appear to be more similar within a gender than within a country
  - Men were less likely to take on emotional unpaid commitments (e.g., child- or adult care) but engage in more leisure time activities

• Societal norms evidently influenced time-use patterns
  - Italian women – i.e., from a more traditional society – were least likely to work full-time and most likely to manage the unpaid work
  - The cluster of Norwegian women – i.e., from a more egalitarian society – were more similar to the male time-use patterns
Discussion

• In turn, the relationship with psychosocial health was consistent across genders and countries:
  – studying was associated with better while unpaid work with worse self-reported general health

• Health differs in men and women due to specific gender roles?
  – e.g., care work (more likely to be performed by women) is related to worse self-perceived general health

https://unsplash.com/de/photos/DK8jxx18-1c
Future directions

• Examine different groups of welfare states – policies vs. norms
  – Extending to other countries (Great Britain, France, and Hungary)

• Time-use characteristics (e.g., main vs. secondary activity, alone or with partner/parent/…)
• Replication using the newer wave of HETUS
References


Thank you for your attention!

Dr. Laura Altweck

Email: laura.altweck@uni-greifswald.de
Tel: +49 3834 420 3813

University of Greifswald,
Institute of Psychology,
Department Health and Prevention
Robert-Blum-Str. 13, 17487 Greifswald