Health profiles among nonagenarians from Mugello district (Tuscany, Italy) and their socio-economic characteristics

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Motivation
- The share of nonagenarians is increasing in most of the developed countries, including Italy
- Studying the health conditions of the oldest-old is one of the major public health challenges nowadays
- Capturing the heterogeneity of health could help deciding for the best care needed by the oldest old
- Even among the oldest old, the health conditions vary with indicators of socio-economic positions

Data: Mugello Study
- The survey comprises nonagenarians coming from 9 out of 11 municipalities of the Mugello area in Tuscany (Italy)
- 504 nonagenarians have been interviewed representing about 65% of the whole Mugello’s nonagenarians alive in 2012
- Information at individual level about different health dimensions...and the socio-economic status

Research Questions
- Is it possible to identify health profiles, taking into account physical, emotional and psychological information about health, among the oldest old?
- Which health characteristics do different groups have? Are there socio-economic differences among the health profiles?

Model results
(Good) health status item probabilities (λ) resulting from the two Latent Class Analysis (LCA A: whole sample and LCA B: testable subsample)

Note: Class 1: “Healthy group”; 2: “Unhealthy group”, for both first (A) and second (B) LCAs; Class 3 for LCA-A: “Unhealthy optimistic group”, for LCA-B: “Semi-autonomous senile group”

OR of demo-socioeconomic characteristics of belonging to the health profiles resulting from the two LCAs (A: whole sample; B: testable subsample)

Descriptive results
Demographic and socio-economic characteristics of the nonagenarians from Mugello, Tuscany (Italy)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>M</th>
<th>F</th>
<th>T</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>135</td>
<td>26.8</td>
<td>369</td>
<td>73.2</td>
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<tr>
<td>Age (m, sd)</td>
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<td>32</td>
<td>23.7</td>
<td>150</td>
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<td>6+</td>
<td>24</td>
<td>17.8</td>
<td>28</td>
</tr>
</tbody>
</table>

*Men vs Women from Pearson χ² test

Health characteristics included in the models (share) by sex

Methods: Latent Class Analysis
- Latent Class Analysis (LCA) was used to identify different health profiles according to various health measures
- LCA with covariates allows the inclusion of covariates to predict individual’s latent class membership
- The model was applied on the whole sample and on the subsample of testable individuals resulting in posterior probabilities of belonging to health groups

Conclusions
- Four different latent classes have been identified among Mugello’s nonagenarians within the two LCAs:
  - Healthy
  - Non-testable
  - Unhealthy
  - Semi-autonomous senile

- Demographic and socioeconomic characteristics were found to be associated with belonging to the health profiles: age, sex, education and work
- Finding health profiles among the oldest-old could help to choose for the right care needed by the oldest-old

OR of demo-socioeconomic characteristics of belonging to the health profiles resulting from the two LCAs (A: whole sample; B: testable subsample)