19TH European Health Forum Gastein
Demographics & Diversity in Europe
New Solutions for Health
Health literacy: From surveys to health(y) outcomes

Gill Rowlands
Professor of Public Health
This presentation

• What is health literacy?
• Is health literacy important?
• The research cycle – where do surveys fit?
• Why are surveys important?
• What health literacy survey data are available in Europe and how can they be used?
• What about countries where there are no health literacy data?
• When do we need to undertake new health literacy surveys?
• Key messages
What is health literacy?

‘Health literacy is linked to literacy and entails people’s knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life during the life course.’

Sorensen K, et al 2012
Deconstructing health literacy

- **Functional**: sufficient basic skills in reading and writing, capacity to be able to function effectively in everyday situations
- **Communicative/interactive**: skills to actively participate in activities, extract information and derive meaning from different forms of communication, and to apply new information to changing circumstances
- **Critical**: more advanced cognitive skills which can be applied to critically analyze information, and to use (it)to exert greater control over life events and situations
- **Public health**: the degree to which individuals and groups can obtain, process, understand, evaluate, and act on information needed to make public health decisions that benefit the community
- **Distributed**: the skills to draw on the health literacy abilities, skills and practices of others as a resource to help seek, understand and use health information to help manage health and make informed choices

Health literacy is the balance between competencies and the environment

Parker R. 2009.
The research cycle – where do surveys fit?
Why are surveys so important?

• They can tell us if there is a problem important enough to address
  • Is there a likely impact on health, illness or economics (individual, health service, wider society)?
  • Are a significant number of people impacted?

• They can identify areas where an intervention might make a difference
  • Where might interventions make a difference?
  • What sort of differences might those interventions make?

• They do not lead directly to improved health(y) outcomes but provide sound evidence for change and hence the basis for research funding
What health literacy data are available in Europe?

• 2008: Adult Literacy and Lifeskills Survey. Basic skills survey with an health literacy measure embedded (the Health Activities Literacy Scale: HALS\(^1\)). In-depth measure measuring basic skills related to health (functional health literacy).

• 2011: The European Health Literacy Survey. Bespoke measure developed according to the HLS EU theoretical model to capture self-perceived skills in functional, interactive and critical health literacy\(^2\):

• 2013: Newest Vital Sign (UK)\(^3\): short measure of functional health literacy skills

• 2012: Health literacy questionnaire (HLQ)\(^4\): in-depth measure of self-perceived health literacy skills at individual level.

• All measure different aspects of health literacy so not interchangeable

| HLS-EU | 1. Netherlands, Ireland, Poland, Greece, Germany, Austria, Spain, Bulgaria.  
2. Hungary, Czech Republic, Portugal, Denmark |
|-------|-------------------------------------------------------------------------------------------------|
| NVS   | 1. Netherlands, Ireland, Poland, Greece, Germany, Austria, Spain, Bulgaria.  
2. Hungary, Czech Republic, Portugal, Denmark |
| HALS  | Netherlands, Hungary |
| HLQ   | Denmark |
## Example: HLS EU data

<table>
<thead>
<tr>
<th>Country</th>
<th>inadequate comp.-HL</th>
<th>problematic comp.-HL</th>
<th>sufficient comp.-HL</th>
<th>excellent comp.-HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>1.8%</td>
<td>26.9%</td>
<td>46.3%</td>
<td>25.1%</td>
</tr>
<tr>
<td>Ireland</td>
<td>10.3%</td>
<td>29.7%</td>
<td>38.7%</td>
<td>21.3%</td>
</tr>
<tr>
<td>Poland</td>
<td>10.2%</td>
<td>34.4%</td>
<td>35.9%</td>
<td>19.5%</td>
</tr>
<tr>
<td>Greece</td>
<td>13.9%</td>
<td>30.9%</td>
<td>39.6%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Germany</td>
<td>11.0%</td>
<td>35.3%</td>
<td>34.1%</td>
<td>19.6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12.4%</td>
<td>35.2%</td>
<td>36.0%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Austria</td>
<td>18.2%</td>
<td>38.2%</td>
<td>33.7%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Spain</td>
<td>7.5%</td>
<td>50.8%</td>
<td>32.6%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>26.9%</td>
<td>35.2%</td>
<td>26.6%</td>
<td>11.3%</td>
</tr>
</tbody>
</table>


SLIDE COURTESY OF Prof. Jürgen M. Pelikan Ludwig Boltzmann Institute Health Promotion Research, WHO-CC for Health Promotion in Hospitals and Health Care, Vienna/Austria
Example: Dutch data

<table>
<thead>
<tr>
<th></th>
<th>HALS</th>
<th></th>
<th>HLS-EU</th>
<th></th>
<th>NVS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Suboptimal HL</td>
<td>2969</td>
<td>52.8</td>
<td>324</td>
<td>31.7</td>
<td>313</td>
<td>30.6</td>
</tr>
<tr>
<td>Optimal HL</td>
<td>2645</td>
<td>47.2</td>
<td>699</td>
<td>68.3</td>
<td>710</td>
<td>69.4</td>
</tr>
<tr>
<td>Total</td>
<td>5614</td>
<td></td>
<td>1023</td>
<td></td>
<td>1023</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Heijmans M et al. HEALIT4EU. 2015
How we can use current European health literacy data

- Analysis within datasets
  - Prevalence
  - Associations with health, illness, health service use and costs etc.
  - Comparisons between countries

- Link to other data
  - Individual level data link in countries where data are collected with a civil registration number e.g. Denmark – explore links with wider health arena, employment etc.
  - Calculation of derived health literacy variables from commonly collected socio-demographic data\(^1,2\) or using geographical estimation methods\(^3\)

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Health literacy, illness and illness management

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>Higher in older people with low health literacy: strong evidence</td>
<td>Not tested</td>
</tr>
<tr>
<td>Ability to manage own medication</td>
<td>Lower in people with low health literacy: moderate evidence</td>
<td>Not reported</td>
</tr>
<tr>
<td>Prevalence of long-term conditions</td>
<td>Low / insufficient evidence</td>
<td>Strong correlation</td>
</tr>
<tr>
<td>Extent to which LTC are limiting</td>
<td>Not reported</td>
<td>Strong correlation</td>
</tr>
</tbody>
</table>
# Health literacy, health and health behaviours

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smoking</strong></td>
<td>Low / insufficient evidence</td>
<td>No correlation</td>
</tr>
<tr>
<td><strong>Alcohol, diet / BMI</strong></td>
<td>Low / insufficient evidence</td>
<td>Weak correlation</td>
</tr>
<tr>
<td><strong>Physical activity</strong></td>
<td>Low / insufficient evidence</td>
<td>Strong correlation</td>
</tr>
<tr>
<td><strong>Self-reported health</strong></td>
<td>Lower in older people with low HL: moderate evidence</td>
<td>Strong correlation</td>
</tr>
</tbody>
</table>
What can we do if there are no health literacy data?

- Identify the proportion of the population with the skills to understand and use information for health\(^1\)
- Gather new data
  - (Bespoke surveys)
  - Insert a validated health literacy measure into a planned or recurrent survey e.g. basic skills surveys, health surveys
  - Consider requests for follow-up interviews and/or access to medical data
- **We cannot impute health literacy data between countries**\(^2\). Health literacy depends on the balance between competencies and national systems and settings.

Moving from surveys to health(y) outcomes
Some key research funders and their priorities

<table>
<thead>
<tr>
<th>Funders</th>
<th>Indirect stakeholders</th>
<th>Likely priorities</th>
<th>Timescales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governments</td>
<td>The public</td>
<td>Improving health&lt;br&gt;Reducing illness&lt;br&gt;Reducing disability&lt;br&gt;Improved cost-effectiveness of health care&lt;br&gt;Increased economic productivity</td>
<td>One election cycle or less</td>
</tr>
<tr>
<td>Patient groups including charities</td>
<td>Patients and carers</td>
<td>Improving health&lt;br&gt;Reducing illness&lt;br&gt;Reducing disability</td>
<td>Will vary</td>
</tr>
<tr>
<td>Employers</td>
<td>Employees</td>
<td>Improving productivity&lt;br&gt;Reducing absenteeism / presenteeism</td>
<td>Months</td>
</tr>
</tbody>
</table>

For surveys to have impact they need to focus on solutions that can be delivered in time to make a difference to the stakeholder.
Key messages

• Health literacy is important:
  • Many European citizens are hampered through suboptimal health literacy skills
  • Low HL is associated with poorer health and more illness

• Surveys play a key role in producing evidence for change

• Bespoke HL surveys are valuable but very expensive

• There is much current HL data using various measures. These data should be made publically available for secondary analysis.

• Current HL data can be used to produce evidence for change

• Where there are no HL data
  • Data can be imputed within countries but not between countries
  • HL measures can be added to other planned or current surveys

• For surveys to lead to health(y) outcomes, there must be early engagement with key stakeholders, and analysis to produce potential solutions as well as evidence of problems.
Health literacy: From surveys to health(y) outcomes

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Additional slides if needed
Who are the key players?

Health literacy: theoretical model

Sorensen K et al. 2012