Examining Translation and Respondents’ Use of Response Scales in 3MC Surveys

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Westat

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Acknowledgment


› Mengyao Hu, University of Michigan
Positive Health by Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Survey</th>
<th>Language of Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>Health and Retirement Study (HRS, 2012)</td>
<td>English</td>
</tr>
<tr>
<td>Germany</td>
<td>SHARE (2004)</td>
<td>German</td>
</tr>
<tr>
<td>China</td>
<td>China Health and Retirement Longitudinal Study (CHARLS, 2011)</td>
<td>Chinese</td>
</tr>
<tr>
<td>China</td>
<td>China Family Panel Study (CFPS, 2012)</td>
<td>Chinese</td>
</tr>
</tbody>
</table>

In general, how would you rate your health?

- excellent, very good, good, fair, poor

Positive health = excellent, very good, good
(Weighted) Percent Reporting Positive Health by Countries

- HRS: 75%
- SHARE-Sweden: 85%
- SHARE-Germany: 58%
- CHARLS: 28%
- CFPS: 57%
Positive Health By Countries

- Sweden: 85% vs. China: 28%
- Difference of 57%
  - True difference in health
  - Difference induced by measurement
    - Difference in survey response process due to culture/language
      - Comprehension
      - Retrieval
      - Judgment
      - Mapping
        - Use of response scales
    - Translation
Positive Health By Countries

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<tbody>
<tr>
<td>Excellent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very good</td>
<td></td>
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<tr>
<td>Good</td>
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<tr>
<td>Fair</td>
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<td>-----------</td>
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<td>----------</td>
</tr>
<tr>
<td>Excellent</td>
<td>Utmärkt</td>
<td>Ausgezeichnet</td>
<td>极好</td>
<td>非常健康</td>
</tr>
<tr>
<td>Very good</td>
<td>Mycket god</td>
<td>Sehr gut</td>
<td>很好</td>
<td>很健康</td>
</tr>
<tr>
<td>Good</td>
<td>God</td>
<td>Gut</td>
<td>好</td>
<td>比较健康</td>
</tr>
<tr>
<td>Fair</td>
<td>Ganska dålig</td>
<td>Mittelmäßig</td>
<td>一般</td>
<td>一般*</td>
</tr>
<tr>
<td>Poor</td>
<td>Dålig</td>
<td>Schlecht</td>
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<td>Very Good</td>
<td>Very healthy</td>
</tr>
<tr>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Somewhat healthy</td>
</tr>
<tr>
<td>Fair</td>
<td>Somewhat poor</td>
<td>Middle/Average/Mediocre</td>
<td>Average</td>
<td>Average*</td>
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<tr>
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<td>Bad</td>
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(Weighted) Distributions of SRH Responses

- HRS: 18% Poor, 11% Fair, 30% Good, 46% Very Good, 18% Excellent
- SHARE-Sweden: 18% Poor, 11% Fair, 30% Good, 46% Very Good, 18% Excellent
- SHARE-Germany: 18% Poor, 11% Fair, 30% Good, 46% Very Good, 18% Excellent
- CHARLS: 18% Poor, 11% Fair, 30% Good, 46% Very Good, 18% Excellent
- CFPS: 18% Poor, 11% Fair, 30% Good, 46% Very Good, 18% Excellent
Weighted Mean Health Scores by SRH Responses

› Health scores:
  • Standardized number of health conditions reported
    - =0: country average
    - <0: better health than country average
    - >0: worse health than country average
Weighted Mean Health Scores by SRH Responses

Health scores:

- Standardized number of health conditions reported:
  - =0: country average
  - <0: better health than country average
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[Diagram showing health scores across different SRH responses.]

![Diagram showing health scores across different SRH responses.](https://via.placeholder.com/150)
So What Happened?

Translation places conceptual mid-point differently on the scale

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(weighted) Percent of Reporting Positive Health

★ Positive health=excellent, very good, good

★ What if positive health=
  • excellent, very good, good for US and Sweden?
  • excellent, very good, good, fair for Germany and Chinese?
(weighted) Percent of Reporting Positive Health

positive health=

- excellent, very good, good for US and Sweden
- excellent, very good, good, fair for Germany and Chinese
(Weighted) Percent of Reporting Positive Health

Positive health=excellent, very good, good for Germans and Chinese

- HRS
- SHARE-Sweden
- SHARE-Germany
- CHARLS
- CFPS

Bar chart showing:
- HRS: 75%
- SHARE-Sweden: 85%
- SHARE-Germany: 58%
- CHARLS: 28%
- CFPS: 57%
Differences observed in 3MC Surveys

- True difference
- Difference induced by measurement
  - Difference in survey response process due to culture/language
    - Comprehension (Lee et al., 2014)
    - Retrieval & Judgment (Johnson et al., 1996)
    - Mapping
      - Use of response scales (Response style literature)
  - Translation
    - Additional source of measurement error (Harkness, 2003)
      - Inflate observed differences
Implications for 3MC Surveys

Translation is important and critical to achieve comparability
  • Testing, testing, testing!

Qualitative interviewing to understand incomparability and to inform changes
Thank You

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