The effect of an Concept Stabilisation Strategy on HRQoL measurement: another piece of the response shift puzzle

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Health-Related Quality of Life

Domains of Health + Influences

- Physical
- Psychological
- Social
- Experiences
- Expectations
- Perceptions
- Environment
Response shift

• May invalidate comparisons of HRQoL taken at two or more time points
• Changing perception of HRQoL over time
• Three components
  – Reconceptualisation
  – Reprioritisation
  – Recalibration

Response shift

• Traditionally occurs as organic adaptation over time due to:
  – Chronic or degenerative disease
  – Life experiences / maturation
  – Aging etc.

• Do people really consider how good or bad health can be?

• We propose organic changes +

VARIABLE CONSIDERATION GIVEN TO ANSWERING HRQOL QUESTIONS
So what happens when our consideration of HRQoL changes?

Example

- **Pre-intervention assessment**
  - When rating HRQoL patient considers:
    - Osteoarthritis makes recreation activities difficult
    - I’m able to complete all home duties independently
  - EQ-5D VAS 40 / 100

- **Post-intervention assessment**
  - When rating HRQoL patient considers:
    - Osteoarthritis makes recreation activities difficult
    - I’m able to complete all home duties independently
    - I have no problem with vision and hearing
    - I have good psychological well being
    - I have no problems with washing, dressing and toileting
  - EQ-5D VAS 70 / 100
  - $70 - 40 = 30$???
Potential solution...

- Concept Stabilisation Strategy (CSS) may reduce response shift by forcing respondents to give a more well considered response.

- May affect all three components of response shift:
  - Recalibration
  - Reprioritisation
  - Reconceptualisation

- But before RCT to see if CSS reduce response shift....

- CSS good and bad health descriptors from AQoL

Questions

1. Does providing CSS strategy (both extreme health states) change answer to VAS?

2. Does providing upper good or bad health descriptors change VAS differently to the other?

3. Is there an order effect (Q1 and 2)?

4. Does the effect of the CSS depend on baseline HRQoL?
Method

• Design:
  • Crossover Randomized Trial

• Participants and Settings:
  • Patients admitted to the Geriatric Assessment and Rehabilitation Unit (with MMSE > 23/30)

• Intervention
  • Good health descriptors (from AQoL)
  • Poor health descriptors (from AQoL)

• Outcome
  • EQ-5D VAS

How would you rate your health-related quality of life today?
An CSS similar to the intervention used for the top anchor:

Consider if in a very good health state you...
had perfect vision and hearing, you had no pain, you were happy or content all the time, had a positive outlook on life, sleep restfully each night and are not anxious at all, your relationships with your family and friends are close and warm and are not affected by your health, you can hike up mountains or run marathons easily. You can’t imagine any aspect of your health to be better, it is perfect.

How would you rate your health-related quality of life today?
An CSS similar to the intervention used for bottom anchor:

Consider if in a very bad health state you ...
were blind, deaf, couldn’t control any movement of your body or usual bodily functions, had constant unbearable pain, severe depression, you’re anxious about many things, can only ever sleep in short bursts, unable to speak or communicate in any way, you struggle against a respirator for every breath - there is nothing about your health that could be any worse

and you have a very itchy nose
…remember you can’t control your arms … or communicate

How would you rate your health-related quality of life today?

VAS 3
Procedure

Consent

Random allocation of order

Group A

Group B

Complete Baseline VAS (VAS 1)

Good health concept stabilisation strategy given

Poor health concept stabilisation strategy given

Complete VAS again (VAS 2)

Good health concept stabilisation strategy given

Poor health concept stabilisation strategy given

Complete VAS again (VAS 3)

Participant Demographics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>151</td>
</tr>
<tr>
<td>Age</td>
<td>79 (8.5)*</td>
</tr>
<tr>
<td>Male</td>
<td>62 (41%)</td>
</tr>
<tr>
<td>MMSE</td>
<td>27 (2)*</td>
</tr>
<tr>
<td>Adm FIM Motor</td>
<td>58 (15)*</td>
</tr>
<tr>
<td>Adm FIM Cognition</td>
<td>32 (3)*</td>
</tr>
</tbody>
</table>

* Mean (stdev)
Results Q1

- Does providing CSS (both good and bad health descriptors) change answer to VAS?

- VAS 3 – VAS 1
  - >70% changed HRQoL VAS score between 5-40 points
  - Group mean higher by 5 points ~ 8% (mean individual change 9 points)

- Significant main effect of assessment p<0.001
  - ANOVA (2x2 Mixed)
- Not confounded by an order effect
  - Order*Assessment interaction not significant
Results Q2

- Does providing good health descriptors change VAS differently to the poor health descriptors?
  - Significant main effect of intervention $p<0.001$
    - $2 \times 2$ Mixed ANOVA
  - Not confounded by an order effect
    - Order*Intervention interaction not significant

Difference between assessments (after each health state descriptors)

Poor health descriptors
- Score moves up

Good health descriptors
- Not as much movement
Results Q3

- Is there a significant order effect?
  - Two were possible (Q1 and Q2)
  - Both not confounding – previously answered

Results Q4

- Does the effect of the anchor points depend on baseline HRQoL?
Discussion

• CSS can change response
• Overall group VAS up
• Order of CSS not significant
• Limitations
  – One population only
  – CSS not most extreme
    • Particularly good health descriptors
  – We now know CSS has an effect but …from this study alone cannot answer whether it reduces response shift over time

So what’s the big picture?

• Response shift threatens to invalidate comparisons HRQoL measurements
• CSS may help get a more “well considered” response
  – ?Less / No response shift

• Need RCT to test if reduce response shift
• Investigate stronger descriptors
Questions?

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