



Global Perceived Effect Scales:
Do they measure change or current status?

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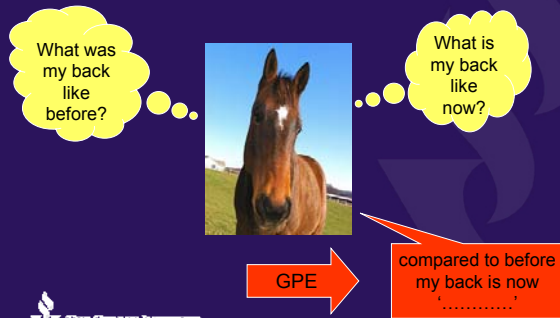
What are Global Perceived Effect (GPE) Scales?

Compared to when the episode started how would you describe yourself these days?

	1) completely recovered	
	2) much improved	
	3) slightly improved	
	4) not changed	
	5) slightly worsened	
	6) much worsened	
	7) worse than ever	

-5	-4	-3	-2	-1	0	1	2	3	4	5
Vastly Worse				Unchanged					Completely Recovered	

How does GPE scale work?



Criticism of GPE



Study Question

- Are patients able to accurately recall previous health status?

What does GPE measure?

Change or current status?

Methods

- Correlations b/w GPE and:
 - Change in status
 - Current status
 - Previous status
- Pain - Numerical rating scale (NRS)
- Disability – Roland Morris (RMDQ)

Data

- 3 RCTs investigating subjects with LBP (n = 239, 314, 105)
- Assessments
 - Baseline
 - 8 f/up points

(16 sets of correlations: 8 NRS, 8 RMDQ)


Terminology

PRE — Baseline (NRS, RMDQ)

Follow-up (NRS, RMDQ)

CHANGE = POST - PRE

POST



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Hypothesis (Guyatt 2002)

Criteria

- Strong correlation
 - CHANGE & GPE $r > 0.5$
- Equal (magnitude) and opposite (direction)
 - PRE & GPE $r \approx +0.25$
 - POST & GPE $r \approx -0.25$

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Results – Guyatt’s hypothesis

- Strong correlation ($r > 0.5$)
 - 13 of 16 occasions
- Equal and opposite correlations
 - 0 of 16 occasions

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Correlations b/w post & GPE

- Compared strength of correlations

CHANGE & GPE vs. POST & GPE

$r = 0.41$ to 0.70 vs. $r = 0.58$ to 0.77

Always stronger

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Is baseline status taken into account?

- Regression models

$$GPE = \alpha + \beta_{POST} + \beta_{PRE}$$
- Regression coefficients (PRE)
 - 13 of 16 occasions significant (range: $\beta = 0.04$ to 0.39)
- Additional R^2 (due to PRE)
 - 12 of 16 occasions $\leq 3\%$ (range: 1-10%)

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Summary

- GPE correlates strongly with change in pain and disability
- BUT**
- Correlates more strongly with post (current) status
- Contribution of pre score to GPE is small

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Considerations / Implications

- Probably GPE does not function in the way we think it does
- Should we just 'believe' the patient when they tell us they're better or worse?
- Is GPE an appropriate 'external criterion of change' for measuring responsiveness and MCIC?



Thank you for your time

