

U Challenges in validating cost (RU) questionnaires B

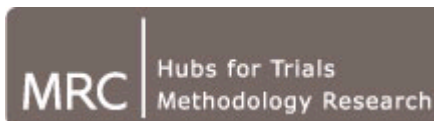
Joanna Coast

DIRUM, University of Birmingham, October 2011

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- *“Our review identified 95 studies which included an economic analysis; of which 85 recorded patient-level resource use. Alarming, only 21 of these reported piloting their patient health care resource use questionnaires and only 28 reported validating their health care resource use data collection methods.”* (DIRUM website, re. HTA systematic review of resource use data collection in trial settings)

Is this ‘alarming’?

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Validity:

- the extent to which the instrument measures what it purports to represent
- and the degree to which it might be helpful in answering a particular question

Why do few studies consider validity?

- Are there some intrinsic conceptual challenges about validating resource use measures?
 - Nature of information being collected
 - Cognitive processes involved in responding
 - Important types of validity for RU questionnaires

Nature of information

Outcome for EE

- Perceptive
 - No gold standard
- Generic

- Snapshot
 - At one or more time points during trial period

RU for EE

- Factual
 - Gold standard
- Specific
 - To condition
 - To intervention
 - To study period
 - To health system
- Complete
 - Across whole trial period

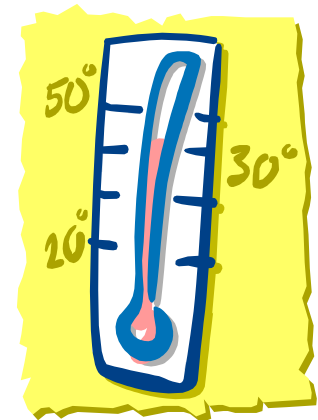
Examples of EQ-5D questions

□ Mobility

- I have no problems in walking about
- I have some problems in walking about
- I am confined to bed

□ Pain/Discomfort

- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain or discomfort

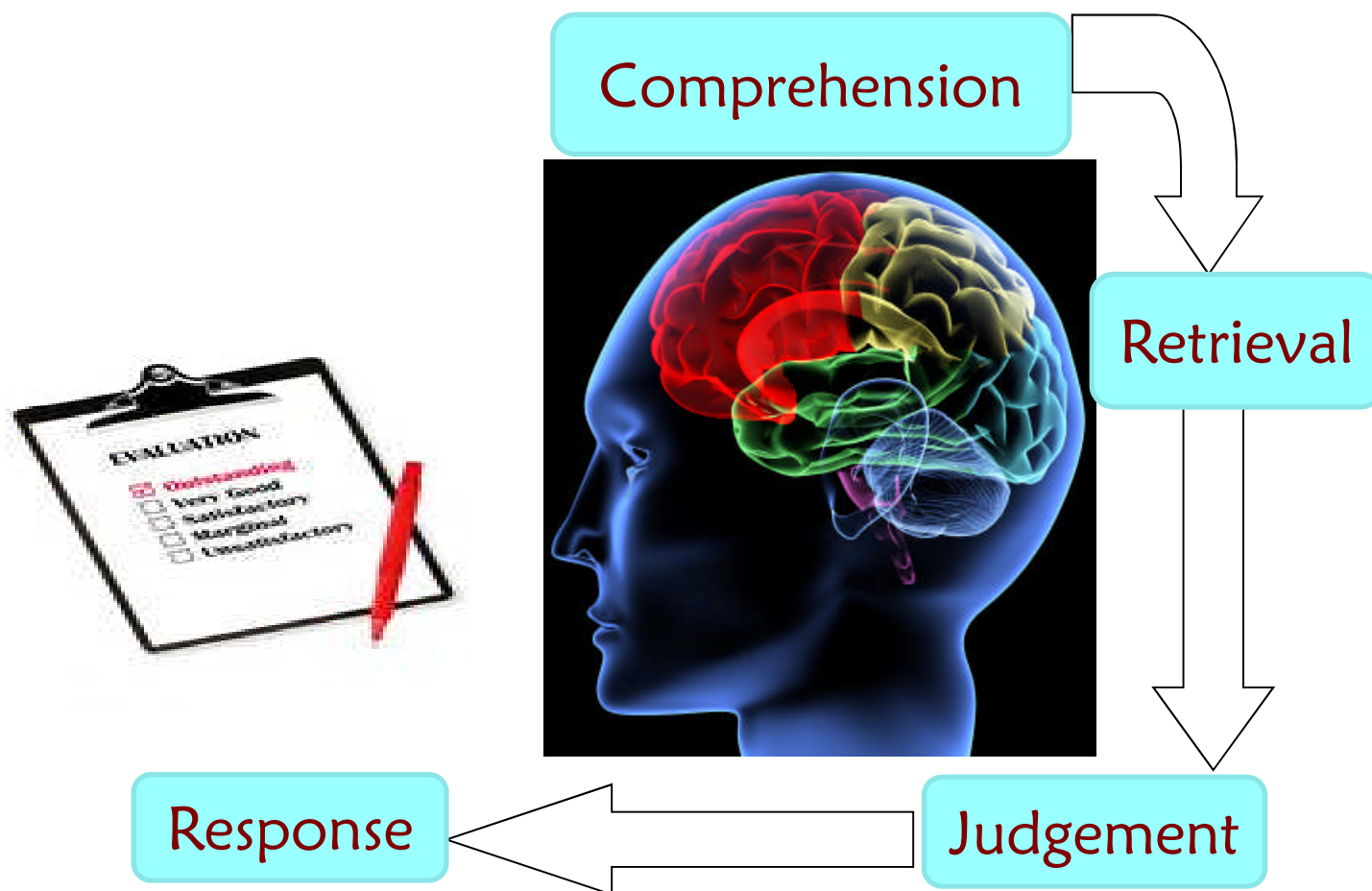


Since you agreed to take part in the study,
have you visited a GP, because of your
skin condition?

No 1 → *please go to question 9*

Yes 2 → **how many visits?**

Cognitive response model



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Validity

- Content validity
- Criterion validity
- Construct validity

Validity

- Content validity
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- Construct validity

Content validity

- “Systematic & documented approach to ensure that the instrument assesses the desired construct” (Cook, American Journal Medicine, 2006)
 - Where the construct is total resource use associated with the intervention for the condition over the study period

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- “Evidence of content validity since a number of health economists brought their own questionnaires from previous studies to provide a checklist of resource use items” (annotated cost questionnaire)
 - “Evidence of content validity since protocol referred to a focus group made up of healthcare professionals who developed the programme content.” (PD REHAB questionnaire)
 - “Evidence of content validity since questionnaire content developed from expert panel review and previous pilot.” (PD MED questionnaire)

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- “Evidence of content validity since resources were defined prior to study” (RUQ-D questionnaire)
 - “Evidence of content validity, resource use identified by reference to similar studies” (Stroke Receipt of Services questionnaire)

Criterion validity

- *Criterion validity* examines a measure's performance in relation to an appropriate 'gold-standard' instrument.
 - Assumption that routine databases provide a gold standard
 - Area for discussion

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- Evidence of criterion validity as questionnaires were compared to patient databases (BRUM questionnaire)
 - Evidence of face, content and criterion validity, for example validation performed to external databases, resource use identified through pilot study and consultation with healthcare professionals (CESAR questionnaire)
 - Evidence of content and criterion validity: for example extensive expert review of previous literature and use of access database to cross-validate dates of admission for length of stays. (HOPEFUL study questionnaire)

Criterion validity & routine databases

- A gold standard?
- Examples of rules required with a database for identifying GP consultations associated with patients receiving alternative dermatological treatments
 - If a skin condition was mentioned, the consultation was recorded, even if this was not the primary reason for the consultation;
 - If a patient had a skin condition, but the consultation was about other problems and the skin condition was not mentioned, this was not recorded;
 - If a repeat prescription was issued on the same day as the consultation but the skin condition was not mentioned, the consultation was not recorded, but the prescription was.

Construct validity

- represents whether relationships between the measure and other factors are those that would be anticipated *a priori* both in terms of observing relationships (in the anticipated direction) where they are expected and not observing them when they are not.
 - Is this enough for resource use data?
 - Not just the relationship that is important but also the absolute quantities...

Discussion

- Is it feasible to validate every RU questionnaire for every condition in every context
 - Unlike for outcome measures, every study will require its own validation
 - Is this a good use of resources?

Discussion

- Validation of methods rather than valuation of questionnaires?
 - E.g. optimal recall times for different groups?
 - E.g. optimal methods of asking about recall (length of time, salient events)

- Extent to which the questionnaire is a ‘whole’ and ‘the questionnaire’ can/should be validated, rather than individual questions or types of question?