Critical factors for valid assessment of subjective symptoms

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What is a subjective symptom?

A symptom apparent to the individual afflicted but not observable by others

examples:

- Tinnitus
- Hyperacusis

Why is it important to measure subjective symptoms?

- Gain an understanding of what an individual is experiencing
- Relate an individuals described symptom to others
- Gain knowledge on particular attributes (e.g. reported behaviours and attitudes) associated with certain conditions
- As a means of tracking development/progress

Common ways to measure subjective symptoms

- Interviews
- Questionnaires
- Incidence charts

How do we know if these measures are:

- Valid

Measuring what there suppose to measure

- Repeatable

Free from random error

Why is validity/repeatability important ?

- Influences the quality of data that is collected
- Ensures that conclusions drawn based on the measure in question are accurate
- Ensures that the measure is sensitive enough to pick out the information that is needed

How would you validate a measure?

- No one clear-cut indicator of a scale's validity
- Validation involves a collection of empirical evidence concerning its use

Main types of Validity

- Face Validity
- Predictive Validity
- Concurrent Validity
- Content Validity
- Construct Validity

Face Validity

Whether the measure *appears* to be measuring what it says it does

Based on opinions of respondents likely to complete the questionnaire/Interview etc

This would be achieved by asking people to give comments when conducting data collection

Predictive Validity

Whether the measure is able to predict some other external and unconnected phenomenon (usually referred to as a criterion)

This would be achieved by comparing and correlating scores obtained on measure against another chosen criterion

High correlation suggests validity

Concurrent Validity

Whether the measure correlates to another test measuring the same attributes

This would be achieved by collecting data from each participant on the two measures and correlating scores obtained

High correlation suggests validity

Content Validity

Whether the measure covers the intended domain of interest

Usually this is assessed by means of expert evaluation and critique of the instrument

Construct Validity

Whether the measures results support hypotheses derived from theory

This can be achieved by testing known hypotheses with the data collected

Validity is shown when hypotheses are correctly proved/disproved

How would you check the repeatability of a measure?

- Test-retest correlations (temporal stability)
- Inter rater correlations
- Internal consistency measures

Test-retest

Reflects the stability of a test score over time

Can be assessed by administering the measure to the same people on two different occasions and calculating the correlation between the two scores obtained

High test-retest correlations indicate a more reliable scale

Inter rater Variability

Reflects variation in test score between different individuals

Can be assessed by administering measure to two different individuals who have related there responses to same person/object, and then correlating the two scores obtained

High correlations indicate a more reliable scale

Internal Consistency

Degree to which the items that make up the scale are all measuring the same underlying attribute

Achieved most commonly by using statistical techniques to calculate Cronbach's coefficient alpha

Score over 0.7 indicates good reliability

Conclusions

- Subjective symptoms form part and sometimes all of what a patient might be experiencing
- Therefore its a necessity to have appropriate measures in order to assess these symptoms
- However we must remember that the validity and repeatability of the measure is important - in order ensure good quality data is collected
- As with good quality data more accurate conclusions can be drawn

Questions???

References

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