

Systematic Review of Goal Attainment Scaling as an Outcome Measure in Drug Trials

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Background

Goal Attainment Scaling (GAS) is a technique aimed to measure change induced by treatment. GAS enables patients to set goals and to determine the relative success in achieving these goals on a 5-point scale that is precisely defined beforehand, so that the instrument measures individual change in a standardised way. This makes GAS a useful measurement instrument in rare conditions, where patients may be more heterogeneous than in more regular conditions. In this systematic review, we aim to investigate whether the measurement properties of GAS have been evaluated in drug trials.

Methods

We have conducted a sensitive search in Medline, PsycINFO and Embase. Included are papers that either describe a study in which a drug intervention is tested using GAS as an outcome measure, or in which the measurement characteristics of GAS are evaluated, in terms of validity, reliability, responsiveness, and/or feasibility. Selection, data extraction and critical appraisal is performed by 2 independent reviewers.

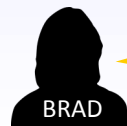
How is Goal Attainment Scaling¹ useful in rare disease patients?

Imagine 3 boys with Duchenne disease:



I want to walk independently

- 2 Adam is unable to walk
- 1 Adam can make 3 steps
- 0 Adam is able to walk for 5 minutes
- 1 Adam can walk for 15 minutes
- 2 Adam can walk longer distances



I want to eat independently

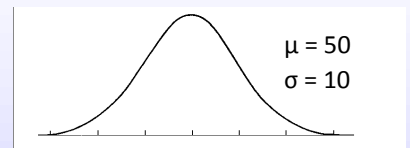
- 2 Brad is unable to eat alone
- 1 Brad can use a spoon for 5 minutes
- 0 Brad can use a spoon during a meal
- 1 Brad can use a knife and fork
- 2 Brad can cut and eat his own food



I want to breathe independently

- 2 Chris is unable to breathe by himself
- 1 Chris can breathe for 10 minutes
- 0 Chris can breathe for one hour
- 1 Chris can breathe for two hours
- 2 Chris can breathe for five hours

$$T = 50 + \frac{10 \sum w_i x_i}{\sqrt{(1-\rho) \sum w_i^2 + \rho (\sum w_i)^2}}$$



Have the measurement properties of GAS been evaluated in drug trials?

4672 articles identified through database searching

0 additional articles found in other sources

3271 articles after removal of duplicates

2975 articles excluded

296 articles assessed for eligibility

Results so far: We are currently working on the data extraction and methodological appraisal of 296 articles. Final results and conclusion will become available at the end of 2014.