

Measurement of fatigue in sarcoidosis: Defining Minimal Clinically Important Differences

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Background

- The Minimal Clinically Important Difference (MCID) represents the smallest change score which is considered clinically worthwhile.
- Knowledge of the MCID is essential for the measurement of fatigue in clinical practice.
- Currently, this knowledge is lacking in sarcoidosis.
- Therefore, the aim of this study was to estimate the MCID for the Fatigue Assessment Scale (FAS) in sarcoidosis.

Methods

- Prospective follow-up study of 1 year
- Sarcoidosis outpatients ($n = 321$) of Maastricht University Medical Centre
- Questionnaires:
 - Fatigue (FAS)
 - Quality of Life (WHOQOL-bref)
- Clinical data and demographics (see Table 1) were taken from the records.
- Participants and drop-outs were compared on demographical, clinical and psychological variables by means of t -tests and Chi-square tests.
- The MCID was estimated by the following methods:
 - Anchor-based method:
 - Anchor Physical Quality of Life
 - Receiver Operating Characteristic
 - Distribution-based methods:
 - Effect Size
 - Standard Error Measurement

Results

Table 1. Descriptive statistics of participants*

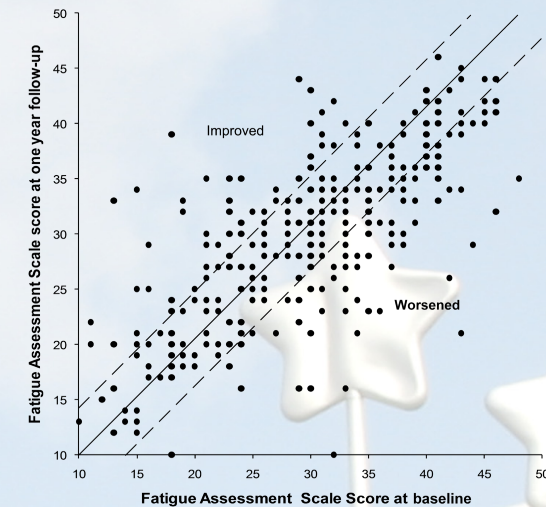
	Participants $n = 321$
Demographics	
Sex: male%	55.8
Ethnicity: Caucasian / Negroid / Asian / other%	95.6 / 3.1 / 0.3 / 0.9
Age	48.5 ± 10.8
Clinical variables	
Time since diagnosis	7.8 ± 7.7
Multisystemic involvement %	48.0
Radiographic stage: 0 / I / II / III / IV %	42.6 / 8.2 / 23.5 / 11.6 / 14.1
FVC	99.4 ± 19.4
FEV ₁	90.2 ± 22.4
DLCO	82.2 ± 17.8
Psychological variables	
Fatigue Assessment Scale score	29.5 ± 8.4
Quality of Life	
Overall Facet	5.9 ± 1.6
Physical Health	12.5 ± 3.1
Psychological Health	13.8 ± 2.5
Social Relationships	15.4 ± 2.9
Environment	15.4 ± 2.5

*Data are expressed in mean \pm standard deviation or in percentages.

DLCO = Diffuse capacity of the lung for carbon monoxide; FEV₁ = Forced Expiratory Volume in one second; FVC = Forced Vital Capacity.

- No significant differences were found between participants and drop-outs.
- The anchor-based MCID found with Receiver Operating Characteristic was 3.5.
- The distribution-based methods showed that a small Effect Size corresponded with a MCID of 4.2.
- Furthermore, the Standard Error Measurement criterion identified a MCID of 3.6.
- The estimates for the MCID found with these methods were rounded to 4 points change on the FAS.

Figure 1. MCID of the FAS



Conclusions

- The MCID was estimated on a change of 4 points on the FAS, based on the anchor- and distribution-based methods.
- This MCID of the FAS may be used in the follow-up of fatigue in clinical trials and in the management of fatigue in individual sarcoidosis patients.

Acknowledgements

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Sarcoidose
Belangenvereniging Nederland
www.sarcoidose.nl

ild care
foundation
www.ildcare.eu

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