# Patient Reported Fatigue and Disability in Multiple Sclerosis: It Matters How You Ask and When You Ask

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## Objective

Explore the relationship of both MFIS (global, physical, cognitive, psychosocial) and FSS as well as the variability of such fatigue scores in people with Multiple Sclerosis (PwMS) along a continuum of disability (PDDS).

#### Background

Fatigue is both commonly reported and can also be disabling in PwMS. Fatigue is not a simple construct and represents a complicated mix of factors. Undiagnosed obstructive sleep apnea (OSA) is common in PwMS reporting fatigue. Appropriate treatment of fatigue in PwMS requires identifying all contributing and causative factors. Specifically asking PwMS regarding the presence and degree of fatigue can be problematic and ideally requires discussion more than a simple "yes/no" and "how much?" question during routine care. Patient Reported Outcomes (PRO) for fatigue such as Modified Fatigue Impact Scale (MFIS) and Fatigue Severity Scale provide more "fatigue" questions than are typically involved in a "routine care discussion". However even use of these 2 scales for evaluating "fatigue" in PwMS on the same day result in discordant results and does not predict the presence or degree of OSA and likely neither the other individual contributing causes of fatigue.

100

80

60

40

20

0

0

1

2

3

% Variability

## Methods

Retrospective review of a prospective PwMS patient registry for those who completed both MFIS and FSS PRO in the course of routine care in a single MS Center.

#### Results

Cohort: 224 PWMS (Gender: 73% female, Average Age: 50 ± 10 years). Average MFIS (global, physical, and psychosocial) and FSS scores all increase with early disability but remains elevated beyond even low levels of disability (PDDS 2), whereas MFIS cognitive fatigue increases and peaks at low levels of disability but declines with increasing physical disability. Variability of all PRO measures is maximum at low levels of PDDS disability and the variability declines with increased PDDS disability for all fatigue measures.



#### Conclusion

Fatigue related PRO such as MFIS with individual sub-scales provide greater information regarding "subtypes" of fatigue than unidimensional PRO measures such as FSS. Discordant PRO fatigue scores are problematic and single PRO use might provide ineffective information for treatment decisions. The marked variability of patient centric fatigue reported even with PRO measures suggests that further investigation is required as to what drives the underlying fatigue symptom for each patient so appropriate and effective targeted interventions can be offered in a meaningful and satisfying patient centric manner.