BACKGROUND: "Benign" multiple sclerosis (MSoD) is defined as a disease duration of >10 years and an Expanded Disability Status Scale (EDSS) score ≤6.0. A diagnosis of MSoD is typically used to identify patients with MS who have had little to no disability progression, no changes in cognitive performance, no impact on physical abilities, or no progression of fatigue. However, patients with MSoD may experience depression, unemployment, or other MS-related issues that might be of possible or possibly not be adequately reflected in an EDSS score ≤6.

OBJECTIVES: To identify the presence, as well as to determine the incidence and type of cognitive impairment in patients with disease duration of >10 years, and comparing high and lower EDSS score impact on depression, fatigue, cognition, and employment. Cognitive impairment, depression, and fatigue are known to have a significant impact on quality of life in MS patients. A disease duration of >10 years would suggest that this group should not be considered to have "benign" disease.

METHODS: Retrospective review of a cross sectional MS cohort database evaluated by age, EDSS score, Beck Depression Inventory (BDI), fatigue severity (MoFattigue Impact Scale), Fatigue Severity Scale, a standardized tool that assesses Fatigue, and Modified Fatigue Battery; and employment status.

RESULTS: Participants were MS patients with both disease duration of >10 years and an EDSS score of >3.9 (n=126), or an EDSS score of 3.9 or less (n=126).
- Both EDSS groups had an mean age of ~51 years.
- There were no between group differences in age and education.
- Although differences in depression and fatigue between the two groups were not significant, both groups scored in the mild to moderate depression range (BDI 14.3±4.13) and mild to high fatigue range (MFPS 45.7±18.8 Vs. 44.8±13.3) with no significant differences in in cognitive performance.
- There were no significant differences in BDI score or distribution and in fatigue score categories (MFPS) (P=0.76, F(5,98)=0.48) or distribution of fatigue scale categories across the groups.
- A greater proportion of the EDSS 3–6.5 group scored more than 1SD below average on all measures (40% vs. 17% P=0.016), executive function (41% vs. 27%, P=0.027), attention (40% vs. 29%, P=0.035), and information processing speed (56% vs. 35%, P=0.045) – (tabled index) and larger proportions of the EDSS 3–6.5 group had at least one (59% vs. 56%, P=0.06, 1-tailed), at least two (69% vs. 38%, P<0.000, 1-tailed), and at least three (42% vs. 30%, P=0.033, 1-tailed) MiniStreams index scores more than 1SD below average for a cognitively healthy group of similar age and education.
- Fewer in the EDSS 3–6.5 group were employed (24% vs. 45%, P=0.003).

CONCLUSIONS: MS patients with disease duration of >10 years experience depression, fatigue, cognitive impairment, and unemployment, with poorer cognitive performance, greater prevalence of cognitive impairment, and higher unemployment for EDSS 3–6.5 vs. EDSS 3. Long-disease duration MS patients should not be considered to have benign chronic disease regardless of EDSS score. Patient reported outcomes in combination with examiner independent computerized cognitive testing provides valuable clinical information not obtained from EDSS alone.

Larger proportions of the EDSS 3–6.5 group scored at least one (59% vs. 56%, P=0.06, 1-tailed), at least two (69% vs. 38%, P=0.000, 1-tailed), and at least three (42% vs. 30%, P=0.033, 1-tailed) MiniStreams index scores more than 1SD below average for a cognitively healthy group of similar age and education.

Fewer in the EDSS 3–6.5 group are employed (24% vs. 45%, P=0.003).