

# Discordance Between Neurologists and People Living With Multiple Sclerosis on the Perception of the Presence and Burden of Cognitive Impairment

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## Introduction

- Approximately 34%-65% of people living with multiple sclerosis (plwMS) develop cognitive impairment (CI). CI can occur from the early stages of MS, although it is more common in secondary progressive multiple sclerosis (SPMS). CI has a negative impact on quality of life for plwMS<sup>1</sup>
- CI often encompasses different domains such as information processing speed, memory problems, difficulty concentrating, and problems using executive functions effectively<sup>2,3,4,5</sup>
- Cognitive status relates to working ability of plwMS and may be predictive of a more severe disease course and disability progression<sup>6,7,8</sup>
- CI is not routinely assessed in clinical consultations, and therefore can remain undetected<sup>9</sup>

## Objective

- This study explores the level of agreement on the perception of the presence of CI between plwMS and neurologists

## Methods

- Retrospective cross-sectional analysis of data from neurologists and plwMS from the US, UK and EU (France, Germany, Italy and Spain) from the 2011-2019 Adelphi Multiple Sclerosis Disease Specific Programme (MS-DSP)
- The Adelphi MS-DSP is a study based in the real-world clinical setting which describes MS management, burden and associated impacts
- Participating neurologists provide data on the next 10 plwMS to have a consultation, patient record form (PRF), with the same plwMS invited to voluntarily complete a patient self-completion form (PSC)
- Both plwMS and neurologists were asked about the presence of problems concentrating around the time of consultation (two weeks prior, or at the consultation, respectively)
- Kappa analysis was used to calculate the level of agreement between neurologists and plwMS (Table 1). Agreement results were derived from matched PRF-PSC pairs

## Results

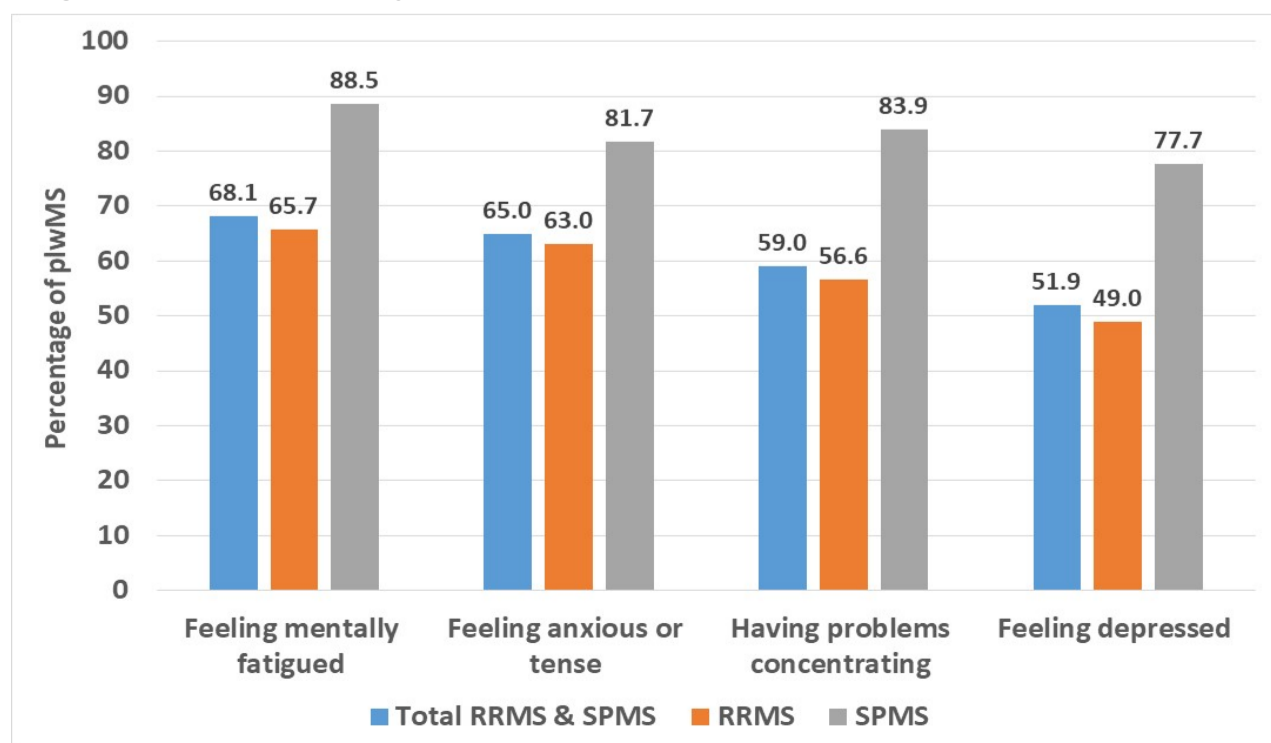
- Surveyed neurologists provided data for 25,374 plwMS, of which 11,220 completed a PSC. Of the 11,220 plwMS with a PSC 4,817 provided information on cognitive and mood symptoms
- The majority of plwMS were female (67%) with an average age of 38.9 yrs for relapsing-remitting MS (RRMS) and 49.4 yrs for SPMS

Table 1. PlwMS characteristics

MS patients (n=4817)		
Age	40.0 (SD 11.77)	
Gender	67% Female 33% Male	
	RRMS (n=4320)	SPMS (n=497)
Age	38.9 (SD 11.52)	49.4 (SD 9.49)
Gender	67% Female 33% Male	64% Female 36% Male
Working full time	53%	21%
Working part time	14%	15%
Student	8%	0%

- Fewer SPMS patients were in full/part time employment (36% vs 67%) vs RRMS
- 59% reporting having problems concentrating, and 68% reporting feeling mentally fatigued (Figure 1)

Figure 1. Proportion of RRMS and SPMS participants reporting cognitive and mood symptoms



- A higher percentage of SPMS participants reported suffering from cognitive or mood symptoms compared to RRMS participants (Figure 1)
- A higher percentage of SPMS participants reported moderate or extreme cognitive and mood symptoms compared to RRMS participants (Figure 2)
- 62% of plwMS reported problems concentrating in the past two weeks. For the same plwMS, neurologists reported 27% currently having problems concentrating (Figure 3), showing a discordance on the perception of the presence of CI between neurologists and plwMS (Kappa=0.162)

Figure 2. Proportion of RRMS and SPMS participants reporting cognitive and mood symptoms classified by severity

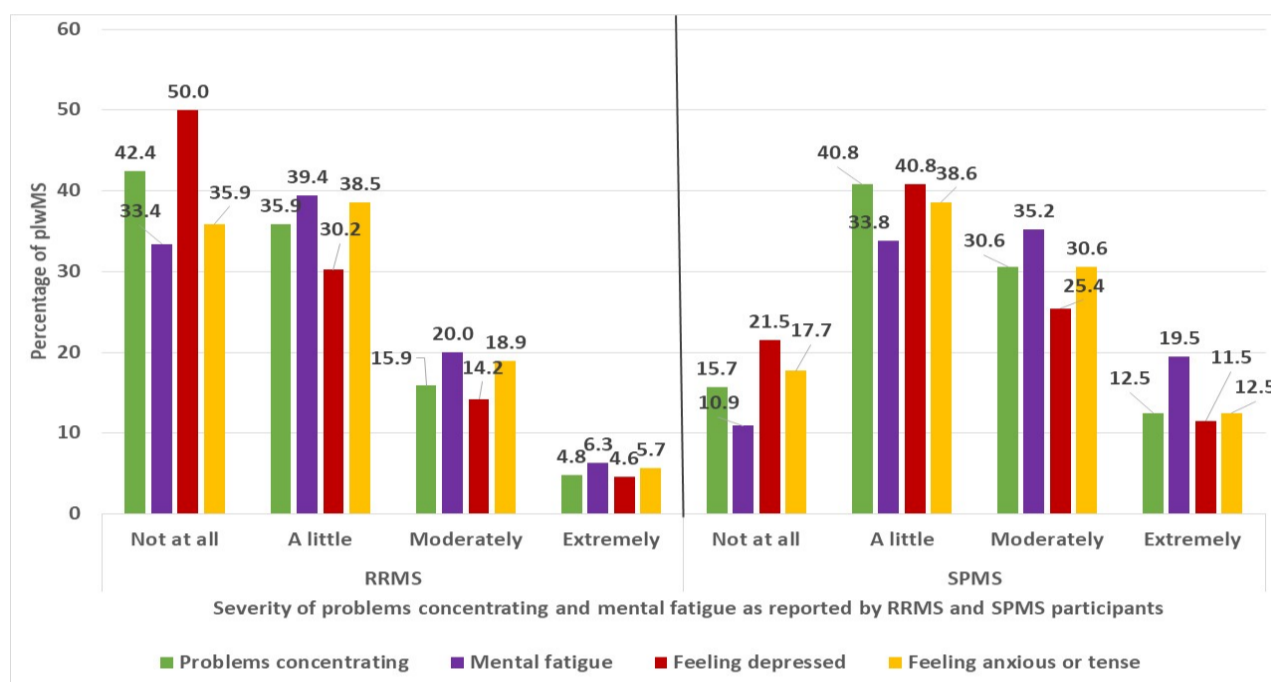
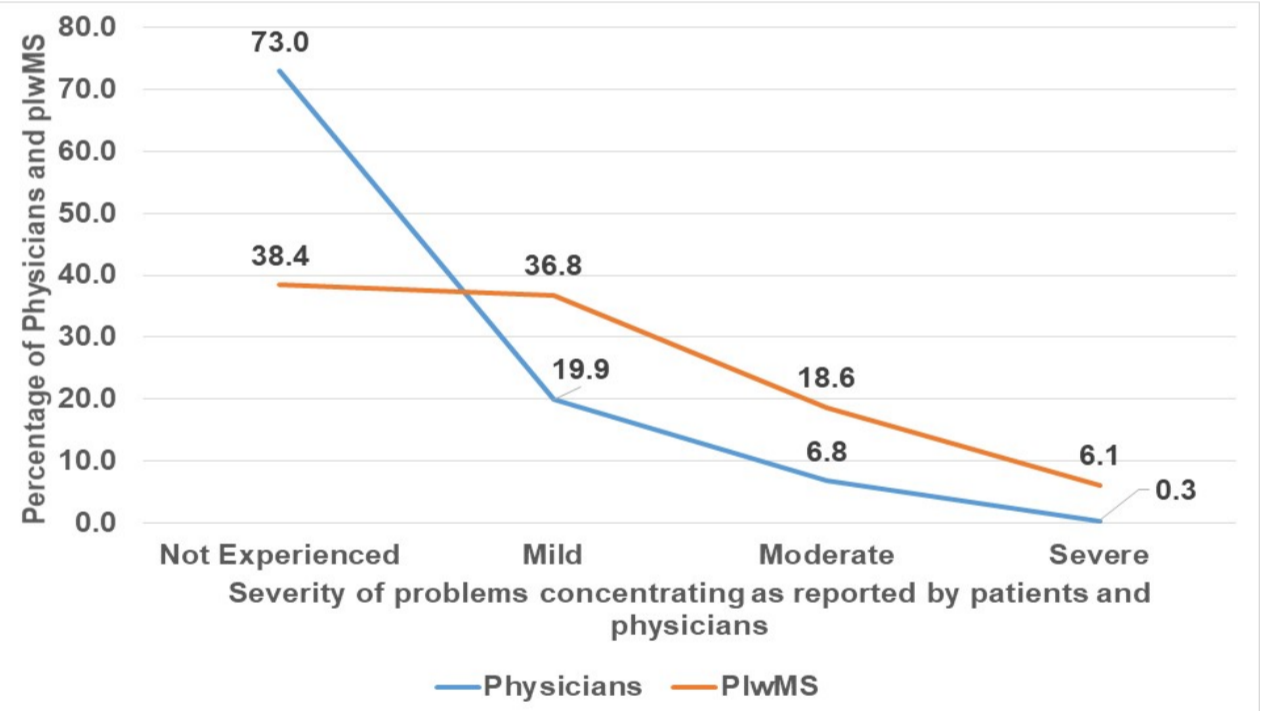


Figure 3. Proportion of physicians and plwMS reporting problems



## Conclusion

- A large proportion of plwMS reported cognitive and mood symptoms, participants with SPMS reporting these symptoms with higher frequency and severity
- A clear discordance is observed between neurologists and plwMS when reporting their perception of the presence and severity of CI with neurologists underestimating their existence
- This might be responsible for cognition not being discussed at the time of consultation and clearly indicates an unmet need

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## Disclosures

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