



Restless Leg Syndrome in Individuals with Multiple Sclerosis: Effects on Disability and Perceived Physical Health

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OBJECTIVES

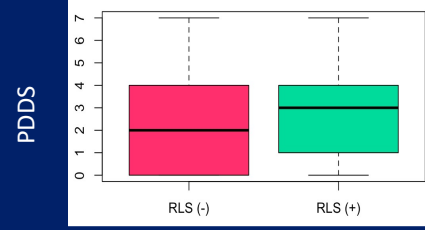
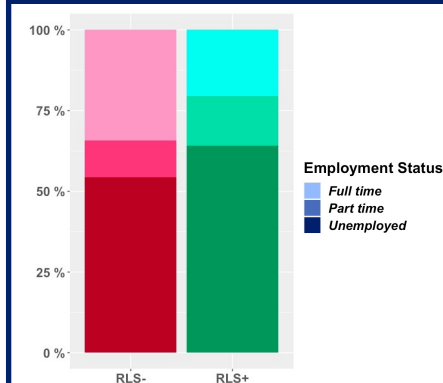
In persons with multiple sclerosis (PwMS), explore the relationship between **restless leg syndrome (RLS)** and disease outcome measures.

BACKGROUND

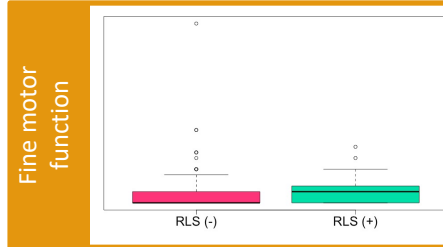
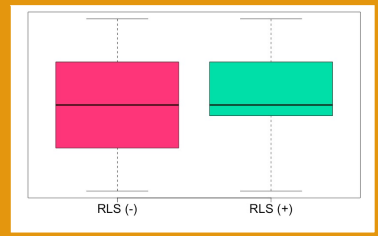
- Restless leg syndrome is significantly more prevalent in PwMS [1]
- There is conflicting evidence on whether PwMS with restless leg syndrome score higher on disability measures, fine motor limitations, and quality of life [2-8]

RESULTS

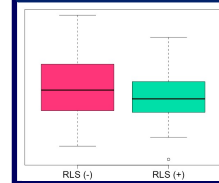
Employment



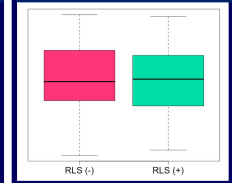
Self-perception of physical health



Physical QOL



Mental QOL



METHODS



Cross-sectional analysis

Survey: REDCap survey emailed between 3/2018-12/2020 to a cohort of 795 adult individuals, 516 of whom had a diagnosis of MS
Cohort: Responses from 179/516 PwMS (35% response rate)

OUTCOME MEASURES:

Motor function

- Patient Determined Disease Steps (PDDS)
- Fine motor function

Quality of Life (SF-v12 questionnaire)

- Mental quality of life
- Physical quality of life
- Self-perception of physical health

Employment

Wilcoxon Rank Sum testing revealed:

- PwMS with RLS were more likely to experience fine motor impairment than PwMS without this comorbidity ($p < 0.05$), and were more likely to self-report limitations to their physical health ($p < 0.05$)
- PwMS with RLS did not show a significant difference in PDDS, employment status, physical quality of life, or mental quality of life when compared to PwMS without this comorbidity.

CONCLUSION

PwMS with restless leg syndrome reported a **higher burden** of fine motor functional impairment and more unfavorable self-perceptions of their physical health.
 Restless leg syndrome **was not associated** with diminished quality of life, employment rate, or PDDS.

REFERENCES

- Seminoli, M., J. Lory, and M. Partinen. Restless legs syndrome in multiple sclerosis. *Sleep Med Rev*. 2015; 22(2): p. 15-22.
- Bruno, E., et al. Restless legs syndrome and multiple sclerosis: a population based case-control study in Catania, Sicily. *Eur J Neurol*. 2015; 22(8): p. 1018-21.
- Gómez-Chocó, M.J., et al. Prevalence of restless legs syndrome and REM sleep behavior disorder in multiple sclerosis. *Mult Scler*. 2007; 13(6): p. 605-6.
- Ciriello, D.J. and B.B. Wallace. Restless legs syndrome and functional limitations among American elders in the Health and Retirement Study. *BMC Geriatr*. 2012; 12: p. 39.
- Giannaki, C.D., et al. Restless legs syndrome in Multiple Sclerosis patients: a contributing factor for fatigue, impaired functional capacity, and diminished health-related quality of life. *Neurological Research*. 2018; 40(7): p. S89-S94.
- Manconi, M., et al. High prevalence of restless legs syndrome in multiple sclerosis. *Eur J Neurol*. 2007; 14(5): p. 534-9.
- Chalgar, A.T. and A. Kalron. Restless legs syndrome in people with multiple sclerosis: An updated systematic review and meta-analysis. *Mult Scler Relat Disord*. 2021; 56: p. 103275.
- Shayeghmad, V., et al. Restless legs syndrome in transverse multiple sclerosis patients: a case-control study. *Int J Prev Med*. 2013; 4(Suppl 2): p. S189-93.

Study Population

Age	51 ± 11
F:M	4:1
RLS (+)	39(20%)
Overall employment	
Full time	47 (31%)
Part time	19 (12%)
Unemployed	87 (57%)

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