



The Impact of Age on the Relationship of Depression and Illness Intrusiveness in Multiple Sclerosis



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Abstract

Objectives: This study examined the effect of age on the relationship between depression and three constructs of illness intrusiveness (relationships and personal development, intimacy, and instrumental).

Methods: Data was collected from MS patients (N=72) who underwent full neuropsychological evaluation. The age of participants was taken from the time of neuropsychological evaluation date. Depression was measured using the Beck Depression Inventory (BDI). Illness intrusiveness was measured using the Illness Intrusiveness Ratings Scale (IIRS). A moderation analysis was conducted using OLS regression and SPSS 25.0. Significant interactions indicated moderation and post-hoc probing was conducted using PROCESS.

Results: For the Instrumental IIRS subscale (M = .391, SD = 1.08), a main effect of BDI (t = 2.18, p = .002) was modified by a BDI X Age interaction (t = 2.03, p = .046). Overall, higher BDI scores were associated with higher illness intrusiveness [b = .025, 95% CI (0.002, 0.048)]. This relationship was only significant for people with the mean age (48.79) or above (b = .0281 to .0794, p < .05). Higher BDI scores were associated with higher Relationships IIRS (b = .041, 95% CI [0.016, 0.066], M = .150, SD = 1.00), and with higher Intimacy IIRS (b = .025, 95% CI [0.008, 0.042], M = .432, SD = .844). Neither age nor the BDI X Age interaction were significant in either subscale (ps > .05).

Conclusions: Age moderated the relationship between depression and instrumental illness intrusiveness in MS patients.

Background

- Depression is prevalent in individuals living with multiple sclerosis (MS), affecting up to 50% of patients.
- Individuals with depression are often distressed about the future and therefore may be more prone to perceiving their illness as a burden.
- Research suggests that depression is associated with increased illness intrusiveness in MS.
- This study adds to the literature by examining age and depression on three aspects of illness intrusiveness.

Methods

Sample: Data was collected from 72 patients with confirmed MS diagnoses who had been referred for neuropsychological testing within the context of general MS care at the MS Center at Holy Name Medical Center in Teaneck, NJ.

Materials: The age of participants was taken from the time of neuropsychological evaluation date. Depression was measured using the Beck Depression Inventory (BDI). Illness intrusiveness was measured using the Illness Intrusiveness Ratings Scale (IIRS), a 13-item, self-report instrument measuring relationships and personal development, intimacy, and instrumental intrusiveness.

Statistics: Descriptive statistics evaluated all variables. Moderation was evaluated using OLS regression with IIRS serving as the outcome and independent variables of BDI, age, and their interaction. Significant interactions indicated moderation and post-hoc probing was conducted using PROCESS. All analyses were two-tailed with α of .05 and conducted using SPSS 25.0.

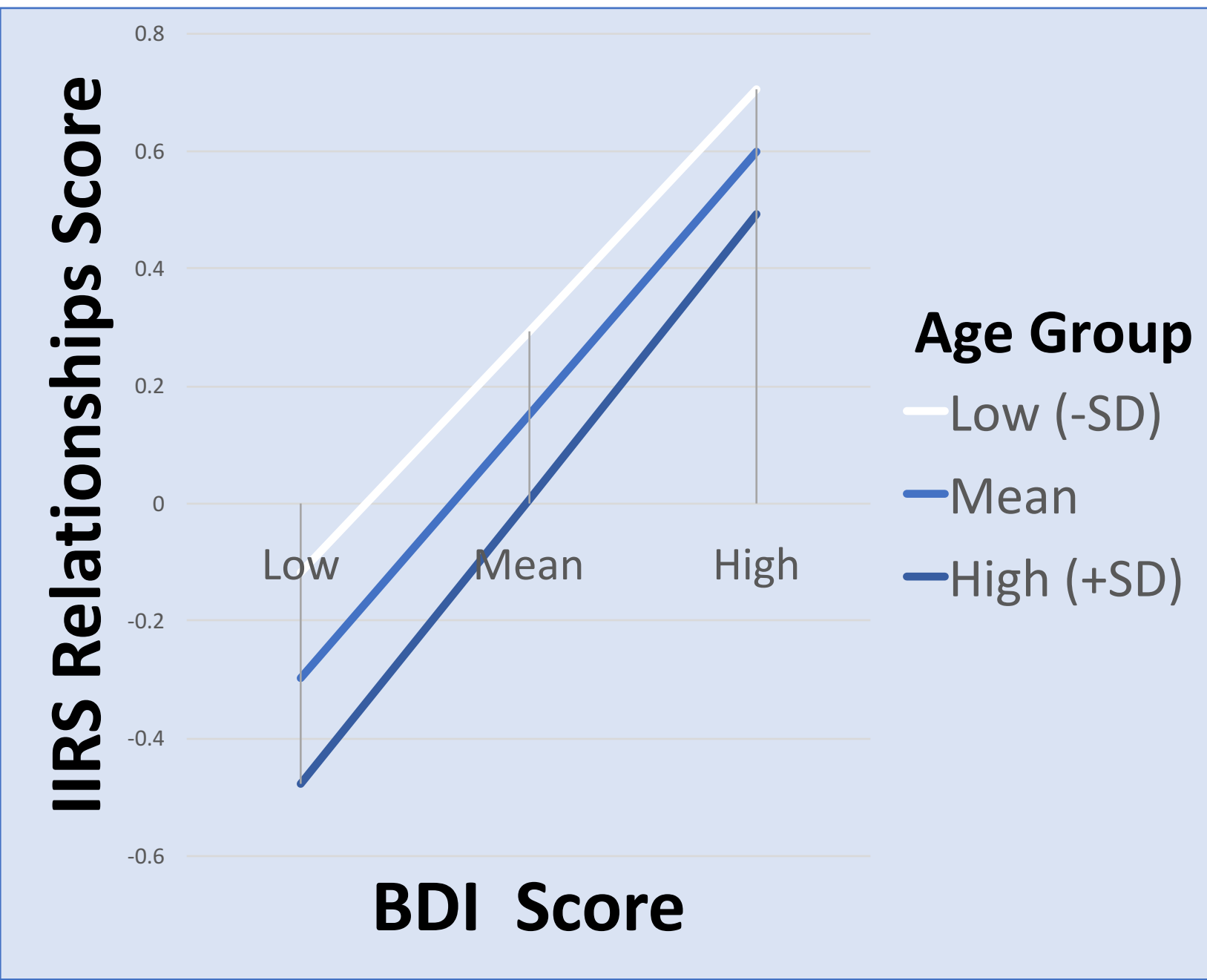
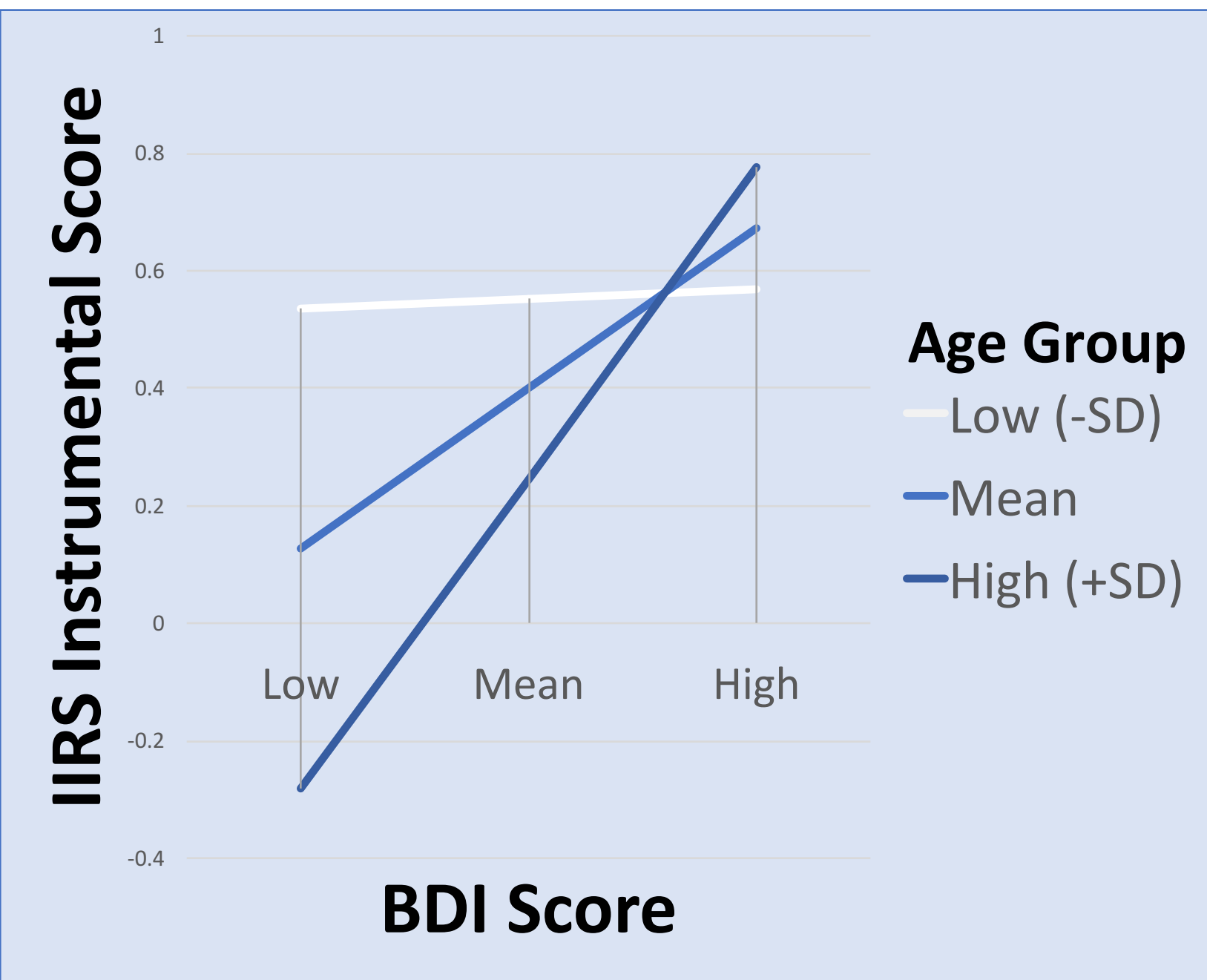
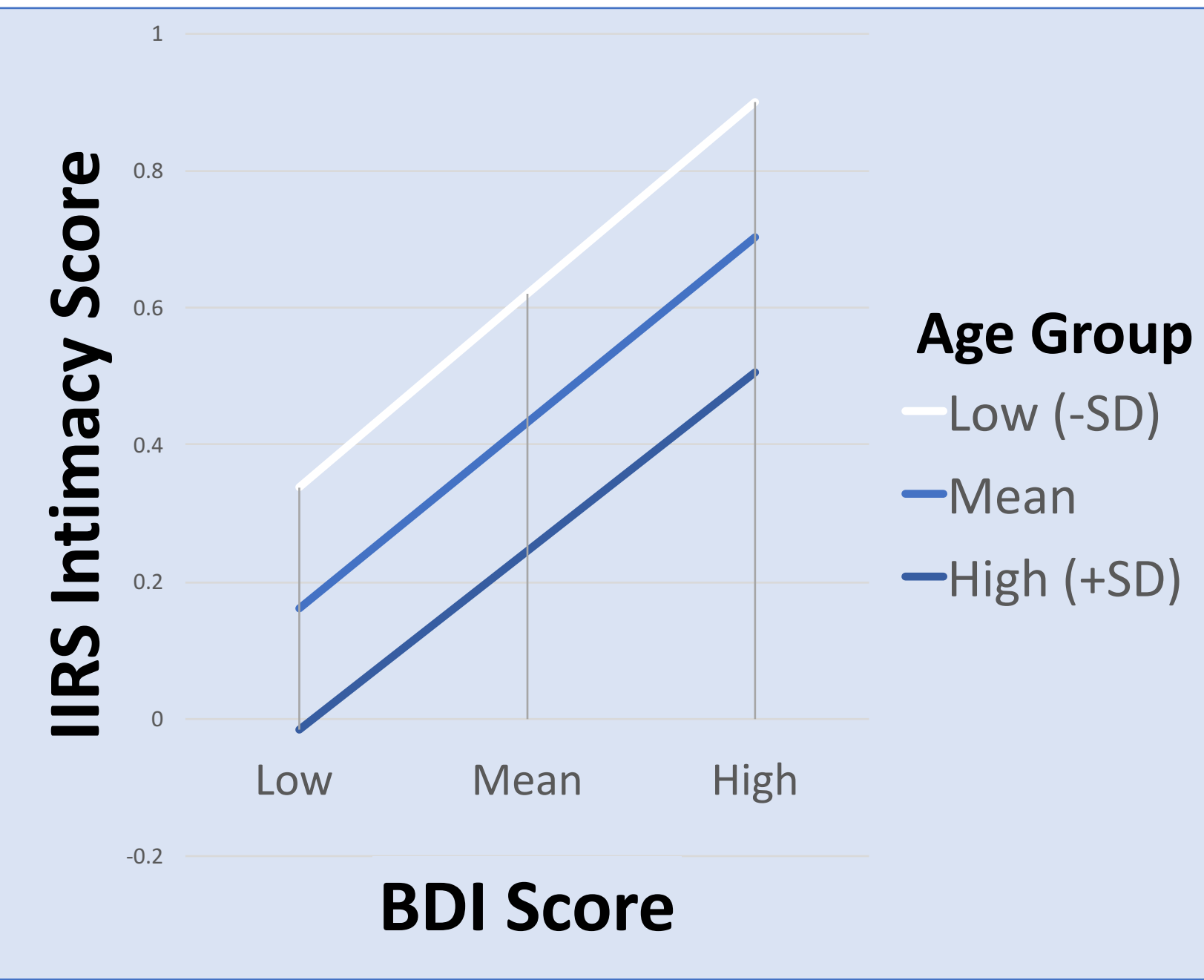
Results

- For the Instrumental IIRS subscale (M = .391, SD = 1.08), a main effect of BDI (t = 2.18, p = .002) was moderated by a BDI X Age interaction (t = 2.03, p = .046).
- Overall, higher BDI scores were associated with higher illness intrusiveness [b = .025, 95% CI (0.002, 0.048)].
- This relationship was only significant for people with the mean age (48.79) or above (b = .0281 to .0794, p < .05).

Characteristic	N (M)	% (SD)
Gender		
Female	56	77.8%
Male	16	22.2%
Age	48.79	12.10
BDI	19.64	10.96
IIRS		
Relationships	0.150	1.00
Intimacy	0.432	0.84
Instrumental	0.391	1.08

Results (continued)

- Higher BDI scores were associated with higher Relationships IIRS (b = .041, 95% CI [0.016, 0.066], M = .150, SD = 1.00), and with higher Intimacy IIRS (b = .025, 95% CI [0.008, 0.042], M = .432, SD = .844).



Conclusions

Age moderated the relationship between depression and instrumental illness intrusiveness in MS patients. Instrumental illness intrusiveness assesses disease impact on aspects of life including paid work, active recreation, financial situation, and health. This study shows increased rates of depression and illness intrusiveness affecting middle aged and older individuals (ages 48.79 to 77), but not individuals younger than 48.79 years.

References

1. Feinstein, A. (2011). Multiple sclerosis and depression. *Multiple Sclerosis Journal*, 17(11), 1276-1281.
2. Bouchard, V., Duquette, P., & Mayo, N. E. (2017). Path to Illness Intrusiveness: What Symptoms Affect the Life of People Living With Multiple Sclerosis?. *Archives of physical medicine and rehabilitation*, 98(7), 1357-1365.