

Implementation of a Telephone-Delivered Education Program to Address Fatigue in Multiple Sclerosis

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Background

- Fatigue is the most common symptom reported by individuals with Multiple Sclerosis (MS).
- Negatively impacts quality of life and contributes to a significant amount of lifetime healthcare costs.
- Pharmacotherapies is the treatment of choice used to manage MS fatigue in the clinical setting, but evidence of their effectiveness is underwhelming and they are costly.
- There are no FDA approved medications to treat MS fatigue.
- Studies have reported that education-based programs show promise in minimizing the effects of MS fatigue and improving self-efficacy.
- There are no formal education-based programs offered at the target institution.

Purpose

- The purpose of this study is to adapt and implement a telephone-delivered education-based program that provide individuals with MS the knowledge needed to reduce the impact of fatigue and improve self-efficacy.

Aims

- **Aim 1:** Adapt and implement a telephone-delivered education program for fatigue in MS.
- **Aim 2:** Reduce the impact of fatigue among MS patients through a telephone-delivered education program over an 8-week period.
- **Aim 3:** Improve patient self-efficacy regarding management of fatigue in MS through implementing a telephone-delivered education program over an 8-week period.

Intervention

- Modeled after Ehde et al. (2015) who conducted a RCT comparing eight weekly individual telephone-delivered self-management intervention (T-SM) vs. eight week individual telephone-delivered MS education intervention (T-ED).
- Goal to reduce impact of MS fatigue and improve self-efficacy.
- Total of 8 weekly individuals educational sessions conducted for participant via telephone.
- Each week focused on core topics:
 - Week 1: Introduction and overview
 - Week 2: Fatigue
 - Week 3: Sleep
 - Week 4 Mood
 - Week 5: Pain
 - Week 6: Nutrition and Activity
 - Week 7: Communication
 - Week 8: Social Support
- Validated tools used to assess education program before and after completion.

Methods

- Design: Pre/Post Intervention
- Setting: Outpatient Multiple Sclerosis clinic
- Sample size: N=17
- Participants: Age 18-76 with known MS fatigue
- Exclusion Criteria:
 - Currently enrolled in a study for fatigue.
 - Individuals who do not have access to a working telephone.
 - Individuals without MS-related fatigue.
- Measure:
 - Aim 1: Raw data scores comparing if sessions were/were not attended by each participant
 - Aim 2: Comparison of median pre/post MFIS scores (Likert scale)
 - Aim 3: Comparison of median in pre/post scores based on UW Self-efficacy scale (Likert scale)
- Aim 2 and 3 were assessed using Wilcoxon Signed Rank Test

Results

Figure 1. Descriptive Statistics of MFIS and SES scores

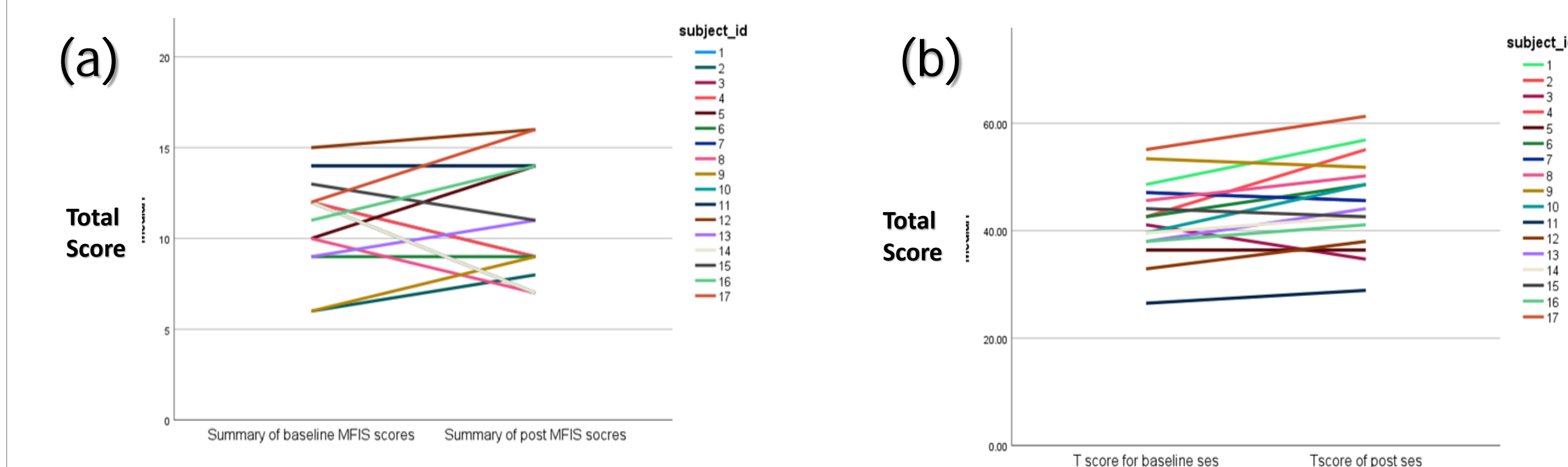


Figure 1: Spaghetti lines depicting MFIS scores for individuals with MS fatigue before vs. after intervention (a) and depicting SES scores for individuals with MS fatigue before vs. after (b). Solid lines are individuals participants.

Figure 2: Median change in score pre/post intervention for MFIS and SES

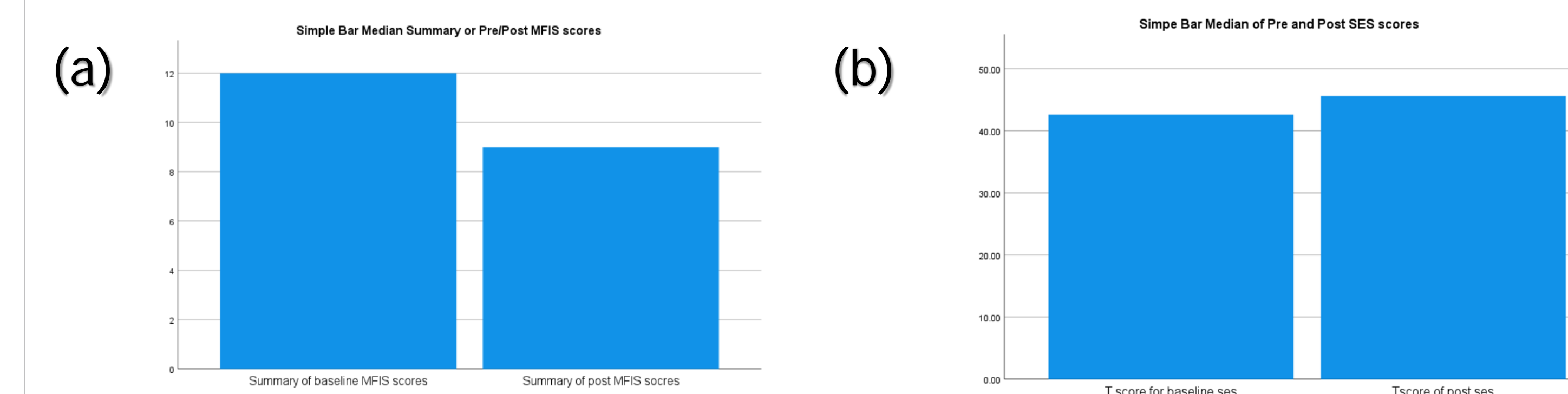


Figure 2: Bar graph depicting median change in MFIS score before and after intervention (a) and median change in SES score before and after intervention (b). Results of formal statistical models are displayed in Table 2.

Table 1. Results of Wilcoxon Signed Rank Models Assessing the Change in Median Scores for MFIS and SES in Individuals with MS Fatigue and Adherence to Intervention

Table 2: Outcome Variables			
	Pre-test (N=17)	Post-test (N=17)	p-value
Fatigue Impact (MFIS), Median (IQR)	12 (3)	9 (7)	.507
Self-Efficacy (SES) Median (IQR)	42.6 (9.1)	45.6 (11.45)	.02
Patient Adherence, N (%)	N/A	100	N/A

Conclusion

- Fatigue greatly affects QOL for individuals with MS.
- Education-based intervention have positive impact on reducing impact of fatigue and improving self-efficacy.
- Real-world application of an education-based intervention delivered via telephone was successfully implemented in an outpatient MS center and resulted in a statistically significant improvement (increase) in self-efficacy. Though there was a reduction in impact of fatigue score this was not proven to be statistically significant but may hold clinical significance.