

# Case Study: Assessing Efficacy of Prospective Memory Interventions in Persons with Multiple Sclerosis via Telehealth

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## Background

- Prospective memory (PM) is the ability to carry out actions in the future or “remembering to remember.”<sup>1</sup>
- PM can be categorized as time-based or event-based.<sup>1</sup>
- Persons with MS (PwMS) can have deficits in PM abilities, which can make it difficult to carry out daily tasks, occupational responsibilities, and medical responsibilities related to MS.<sup>1, 2, 3</sup>
- There are cognitive based interventions for PwMS, however, there is a lack of research on PM interventions for PwMS.<sup>4</sup>
- The interventions include implementation of intentions and visualization techniques.

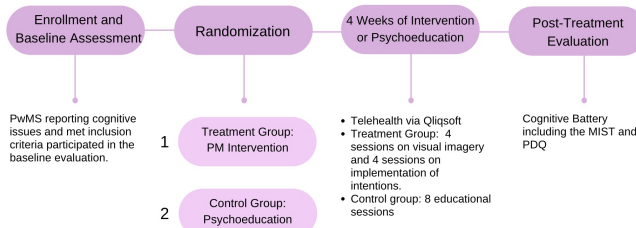
## Objectives

1. This case study is a part of a Randomized Feasibility Trial to assess the feasibility and efficacy of telehealth in PM interventions in PwMS.
2. To describe the effects of visual imagery and implementation of intentions training on PM in PwMS.

## Methods

**Participants:** This case study focuses on one person with MS randomized into the treatment group ( $n=18$ ). PM measures on 4 participants of the control group are tabulated.

### Procedure:



### Measures and Analysis

- Descriptive Statistics
- This case study describes results on the Memory for Intentions Test (MIST), a measure of PM and Perceived Deficits Questionnaire (PDQ) as a subjective measure of PM abilities and deficits.

## Results

**Case Study:** This participant is a 40-year-old woman randomized into the treatment group currently on a disease modifying therapy (DMT) and reports memory problems concerning medication adherence, driving, and making phone calls.

**Table 1.** Descriptive data displaying pre-treatment and post-treatment PM measures from the MIST.

MIST	Baseline	Post-Treatment
PMT Raw Score	24	27
PMT Percentile	3	7

**Table 2.** Descriptive data depicting pre-treatment and post-treatment PM measures from the PDQ-PM.

PDQ	Baseline	Post-Treatment
PDQ-PM	10	8

**Table 3.** Descriptive data representing baseline and post-assessment PMT and PDQ-PM measures in controls ( $n=4$ ).

PM Measure	Control Participants			
	1	2	3	4
Pre- PMT Raw Score	42	36	30	36
Post- PMT Raw Score	18	27	30	39
Pre- PMT Percentile	65	35	14	35
Post- PMT Percentile	2	10	14	51
Pre- PDQ- PM	7	10	4	9
Post- PDQ- PM	8	5	4	7

## Results Cont.

- Symptoms and impact on daily activities:
  - Not affected by anxiety and very mild limitations associated with depression.
  - Mild limitations in walking/mobility, hand function/dexterity, spasticity and stiffness, bodily pain, sensory symptoms, vision, dizziness where the participants makes frequent adjustments to daily activities.
  - Moderate limitations in bladder control, fatigue, and cognitive function where the participant reduces their daily activities.

## Conclusions

- This participant shows improved PMT raw scores.
- Pre- and post-PMT percentiles are indicative that the participant has sustained below average PM.
- This participant's PDQ-PM scores decrease post-intervention, suggesting a perceived decrease in PM deficits.
- The clinical efficacy of PM interventions cannot be assessed based on this case study.

## References

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