

Evaluation of the Memory Support System in a Canadian Memory Clinic and Geriatric Day Hospital

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BACKGROUND

Individuals with mild cognitive impairment (MCI) may have difficulty maintaining independence in their instrumental activities of daily living (IADLs). The Memory Support System (MSS) is a curriculum and calendar/note-taking system that aids individuals with MCI in maintaining their independence in IADLs. It is part of the Mayo Clinic Healthy Action to Benefit Independence & Thinking (HABIT) Program.

Objective: Determine the feasibility and efficacy of providing the MSS in a Canadian centre.

METHODS

- Individuals with MCI and their study partner were trained to use the MSS.
- The MSS was administered in 10 sessions over the course of ~4-6 weeks.

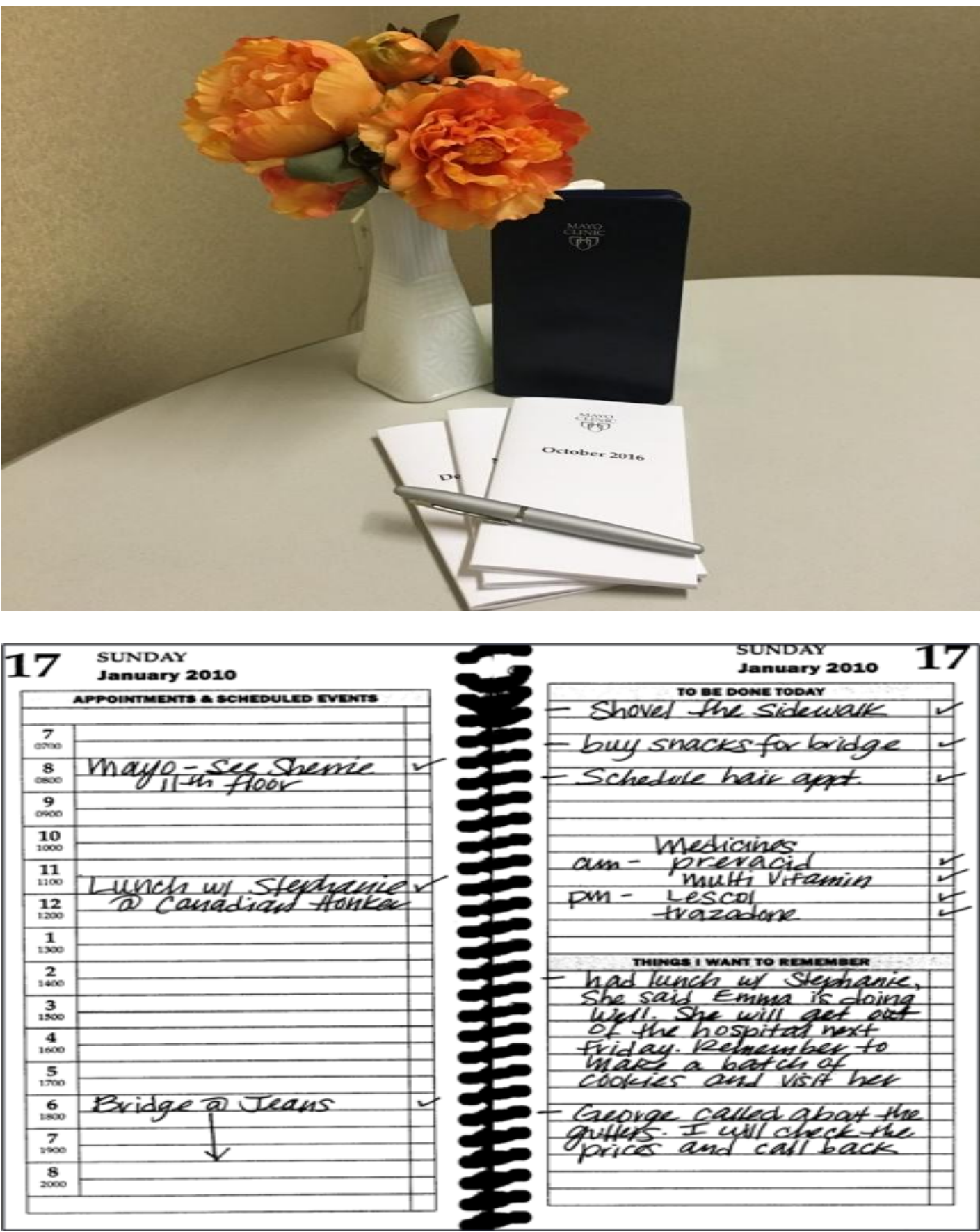


Figure 1. Memory Support System Calendar.

METHODS

- Recruitment is ongoing with a target of 20 participant-partner dyads.
- At baseline, treatment end, and 2-month follow-up sessions, the following outcome measures are assessed:
 - MSS adherence scale
 - Chronic Disease Self-Efficacy Scale
 - Depression (CES-D)
 - Anxiety (Stait-Trait Inventory)
 - Caregiver burden (ZBI-12)
 - Quality of Life (QOL-AD)
 - Cognitively mediated functioning (E-Cog)
 - IADLs (FAQ)
- Effect Sizes (Cohen’s d value) were calculated for treatment end and 2-month follow up sessions.

RESULTS

Outcome Measure	Group	At Treatment End		At 2-Month Follow-up	
MSS Adherence	Participant	1.4 (Large Improvement)	▲	0.60 (Moderate Improvement)	▲
Self-Efficacy for Memory	Participant	0.08 (No Change)	◄►	0.40 (Small Improvement)	▲
Depression (CES-D)	Participant	0.19 (No Change)	▲	0.23 (Small Improvement)	▲
Quality of Life	Participant	-0.21 (Small Decline)	▼	-0.12 (No change)	◄►
Self-reported IADLs (E-Cog)	Participant	0.54 (Moderate Improvement)	▲	0.42 (Small Improvement)	▲
Anxiety	Participant	0.06 (No Change)	◄►	-0.09 (No Change)	◄►
Caregiver Burden	Partner	0.17 (No Change)	◄►	0.16 (No change)	◄►
Anxiety	Partner	0.40 (Small Improvement)	▲	0.30 (Small Improvement)	▲
Quality of Life	Partner	0.02 (No Change)	◄►	0.80 (Moderate Improvement)	▲
Partner-reported IADLs	Partner	0.00 (No Change)	◄►	0.21 (Small Improvement)	▲
Depression (CES-D)	Partner	0.01 (No Change)	◄►	0.46 (Small Improvement)	▲

Figure 2. Effect sizes* (Cohen's d values) for MSS adherence, quality of life, self-efficacy, caregiver burden, depression symptoms, anxiety symptoms, cognitively mediated functional abilities, and IADLs in participants with MCI and their partners at treatment end and 2-month follow-up.
*Effect size: 0.2-0.5 (Small), 0.5-0.8 (Moderate), >0.8 (Large)

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RESULTS

Number of participant dyads	Average length of treatment (weeks)	Average % virtual sessions
8	6.5	50

Figure 3 displays the timeline of the MSS sessions, and the percentage of virtual versus in-person sessions that were administered.

Preliminary data from eight participant dyads (MCI participants – 12.5% female, mean age = 74 [range = 67-91] mean education = 16.8 [range = 13-18]) who completed the intervention and follow-up visit show that MSS training was associated with (**Figure 2**):

- Improved MSS adherence, cognitively mediated functional abilities and symptoms of depression at treatment end, which was sustained at 2-month follow-up in the participants with MCI.
- Improved self-efficacy for memory and partner-reported IADLs at 2-month follow-up in the participants with MCI.
- Improved anxiety symptoms at treatment end, which was sustained at 2-month follow-up in the study partners.
- Improved quality of life and symptoms of depression at 2-month follow-up in the study partners

CONCLUSION

- Preliminary results from a Canadian centre show similar benefits from the MSS compared to previously published studies on the MSS, even with changes in the length of time over which the intervention is administered, and the hybrid model of administering the treatment.
- Administering the MSS as part of a clinical program may provide benefits for individuals with MCI and their partners.