

**Results:** Pearson's  $r$  correlations revealed that total number of domains showing decline on the modified Lawton & Brody IADL scale was strongly correlated with MIST 15-min delay (MIST-15;  $r=-0.503$ ,  $p=0.005$ ), such that worse PM performance on long delay items was associated with more domains of IADL decline; this relationship was also reflected in the MIST Total Score ( $r=-0.389$ ;  $p=0.033$ ). No other MIST index was associated with IADL decline ( $ps>0.10$ ). MIST-15 did not significantly correlate with any other measure of self-reported functioning (PRMQ, FBP; all  $ps>0.10$ ), but was associated with specific declines in buying groceries ( $p=0.009$ ), performing home repairs ( $p=0.021$ ), shopping ( $p=0.033$ ), and doing laundry ( $p=0.035$ ). Relationships at a trend level included declines in housekeeping ( $p=0.05$ ), managing finances ( $p=0.097$ ), cooking ( $p=0.092$ ), and taking medication ( $p=0.066$ ). To determine specificity of the relationship between MIST-15 and everyday functioning, a linear regression was conducted using covariates that were significantly correlated with total number of domains of IADL decline (i.e., Selective Reminding Test total learning trials, CVLT-II Long Delay Free Recall, Symbol Digit Modalities Test total). This regression was statistically significant [ $F(4,24)=4.263$ ;  $p=0.10$ ;  $R^2=0.415$ ], and MIST-15 remained an independent predictor ( $p=0.047$ ;  $R^2$  change=0.107).

**Conclusions:** Results suggest that the ability to remember to carry out intended actions after longer delay periods may be uniquely related to severity of declines in everyday functioning. Longer PM delays place higher demands on both memory and executive processes, as the encoded intention must survive a longer decay wherein monitoring for the appropriate cue is extended, and likely better mimic PM tasks in daily life (e.g., remembering to pick up milk after the workday). In light of these findings, clinicians may seek to include brief trials of long delay PM tasks as part of a comprehensive battery to screen for functional decline.

**Categories:** Memory Functions/Amnesia

**Keyword 1:** memory: prospective

**Keyword 2:** everyday functioning

**Keyword 3:** traumatic brain injury

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## 6 Trauma Exposure as a Predictor for Score Profiles on Structured and Unstructured Tasks of Verbal Memory in a Community Sample

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**Objective:** Evidence suggests that the most consistent cognitive impairment found in individuals experiencing posttraumatic stress disorder symptomology is verbal memory impairment (Johnsen & Asbjornsen, 2008). More specifically, research has shown that patients with PTSD perform poorer on verbal memory tasks relating to logical (story) memory than on word memory tasks, such as CVLT-III (Barrera-Valencia et al., 2017). While recent literature accounts for memory impairments related to PTSD, less is known about this relationship for individuals with mere trauma exposure compared to individuals without trauma exposure. The present research aims to determine if there is a significant impact on WMS-LM when compared to CVLT-III for individuals in a community sample that have been exposed to a traumatic event in their lifetime.

**Participants and Methods:** One hundred nineteen patients presented to a community-based practice for neuropsychological evaluation. Patients were screened for trauma exposure during a clinical interview. Immediate and long delay trials of Wechsler Memory Scale IV Logical Memory (WMS-LM) were used to examine structured learning and memory and the California Verbal Learning Test (CVLT-II) immediate and long delay recalls were used to examine unstructured learning and memory. Out of the 119 patients, 36 patients reported trauma exposure. Twenty-five were diagnosed as "normal," 62 were diagnosed with mild cognitive impairment, and 32 were diagnosed with dementia. A one-way MANOVA was conducted to examine the relationship across the multiple dependent variables.

**Results:** There was a statistically significant difference in immediate recall in memory based on exposure to trauma,  $F(2, 116) = 3.28$ ,  $p < .05$ ; Wilk's  $\Lambda = 0.947$ , partial  $\eta^2 = .53$ , such that individuals with trauma exposure performed

better. For long delay recall performance, there was a similar trend though it did not reach statistical significance  $F(2, 114) = 3.03$ ,  $p = .052$ ; Wilk's  $\Lambda = 0.949$ , partial  $\eta^2 = .51$ .

**Conclusions:** Data showed that patients who reported trauma exposure scored significantly higher on immediate recall performance on CVLT and WMS-LM than those who did not report trauma exposure. Although research suggests that patients who were exposed to trauma often experience cognitive deficits on verbal memory tasks, evidence also shows that trauma exposure can lead to higher immediate recall performance in memory related to attentional allocation modeling (Hayes et al., 2012).

**Categories:** Memory Functions/Amnesia

**Keyword 1:** post-traumatic stress disorder

**Keyword 2:** memory: normal

**Keyword 3:** learning

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## 7 Self Assessment Memory Scale, a new simple method for evaluating memory function

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**Objective:** Given the results of the clinical trials for the disease-modifying therapy for Alzheimer's disease and its mechanism of action, it is necessary to start at the early stage as soon as possible. To this end, there is a need for a tool that allows easy periodic home assessment of memory change from the early stages of the disease. The purpose of this study is to establish a new method of memory evaluation showing well-correlated with Logical Memory (LM) II subtest score of the WMS-R and that, at the same time, can be done easily in a short time.

**Participants and Methods:** The subjects were 85 subjects (including 12 MCI, 8 AD, and 65 age people with normal cognitive function). In the new method, 8-picture recall and 16-word recognition were assessed, respectively, and the index was calculated by adding up the ratio of correct responses to both tests (max point is

two). The correlation with the LM II score was examined.

**Results:** Our statistical analysis showed that 8-picture recall ( $R=0.872$ ,  $p<0.001$ ) and the index ( $R=0.857$ ,  $p<0.001$ ) showed a significant correlation with the LMII score. On the other hand, the 16-word regression and LM II score was  $R = 0.691$  ( $p<0.001$ ), relatively lower than the other two scores, because this task may have been higher than the true ability due to the false recognition of words that were not there.

**Conclusions:** Our new method can easily predict the LM II score of WMS-R in about one third of the time required by conventional methods. We named this index as Self Assessment Memory Scale (SAMS), and are planning to develop a digital tool to enable easy and self-accessible evaluation of recall.

**Categories:** Memory Functions/Amnesia

**Keyword 1:** cognitive screening

**Keyword 2:** aging (normal)

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## 8 Computational Modeling of Memory Processes in non-CNS Cancer Survivors

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**Objective:** Cognitive impairment is an often-overlooked issue that non-CNS cancer survivors face. Our current understanding of their issues is lacking, as traditional memory sum scores grant us little insight into the underlying cognitive processes of memory and its impairment. We can improve the informativity of memory impairment studies by isolating which cognitive processes are impaired.

**Participants and Methods:** Participants were breast cancer survivors who received chemotherapy ( $n=68$ ), and women controls ( $n=157$ ). The participants completed the Amsterdam Cognition Scan (ACS), in which classical neuropsychological tests are digitally recreated for online at-home administration. Online administration reduces the burden on patients and allows for recording measurements with greater precision. The specific test used to