ARE MEMORY AND WELLBEING LINKED? AN EXPLORATORY STUDY WITH ADULTS OVER AGE 80

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ABSTRACT

Objective: Despite the expectation that memory performance and measures of wellbeing ought to be related, very little research has examined this. The available research has focused mostly on autobiographical memory rather than measures of explicit memory. The purpose of this study was to examine the relationships of verbal and visuospatial learning and memory performance to age, education, mental status, and measures of wellbeing (i.e., depression, life satisfaction, self-esteem, and satisfaction with age) in a sample of older adults ages 80-99 years.
Participants and Methods: The sample consisted of 84 predominantly Caucasian adults (25 men, 59 women) ages 80-99 years (M = 87.0, SD = 4.64) with 3-21 years of education (M = 13.2, SD = 3.90). The sample included individuals from both rural and urban settings residing in assisted care facilities, nursing homes, and independently in private residences. They completed the Mini-Mental State Exam, Geriatric Depression Scale, Word List and Figure from the Memory Test for Older Adults Short Version (MTOA:S), Diener Satisfaction with Life Scale, Rosenberg Self-Esteem Scale, and an age satisfaction item.
Results: An examination of descriptive statistics showed good variability for each of the measures. Overall, the Word List and Figure showed moderate positive correlations (r=.49 to .65) with mental status scores, low negative correlations (r=-.14 to -.30) with age, and nonsignificant correlations with each of years of education and scores on the depression, life satisfaction, self-esteem, and age satisfaction measures.
Conclusion: As expected, lower mental status scores and older ages were associated with lower verbal and visuospatial learning and memory performance. No significant relationships were found, however, between any of the measures of wellbeing and verbal and visuospatial learning and memory scores. Thus, it does not appear to be the case that wellbeing variables impact learning and memory performance or vice versa in this age group.

INTRODUCTION

Despite the general expectation that memory performance and measures of wellbeing ought to be related to one another (Jetten et al., 2010; Jajodia & Borders, 2011), very little research has examined this. The available research examining relationships between memory and wellbeing has focused mostly on autobiographical memory (Jetten et al., 2010; McLean & Lilgendahl, 2008) or self-reported memory (Bazargan & Bazargan, 1997; Verhaeghen et al., 2000) rather than on explicit memory performance.

The purpose of this study was to examine the relationships of verbal and visuospatial learning and memory performance to age, education, mental status, and particularly measures of wellbeing (i.e.,

depression, life satisfaction, self-esteem, and satisfaction with age) in a sample of older adults ages 80-99 years.

METHOD

Participants

The sample consisted of 84 predominantly Caucasian adults (25 men, 59 women) ages 80-99 years (M = 87.0, SD = 4.64) with 3-21 years of education (M = 13.2, SD = 3.90). The sample included individuals from both rural and urban settings residing in assisted care facilities, nursing homes, and independently in private residences.

Procedure

Participants completed the following measures in the order below, although a few other neuropsychological measures not of interest to the present study were also given.

Mini-Mental State Examination (MMSE; Folstein, et al., 1975) is a screen of cognitive functioning in areas such as orientation to time and place, language, and memory.

Memory Test for Older Adults: Short Version (MTOA:S; Hubley & Tombaugh, 2002) consists of a 10-word Word List and a simplified complex Figure. The Word List uses 3 learning trials, a 10-minute delayed recall trial, and a recognition task. The simplified complex Figure subtest uses 3 learning trials, a 10-minute delayed recall trial, and a copy trial. In this study, a learning score (summed across the 3 trials) and a memory score were used.

Geriatric Depression Scale (GDS; Yesavage et al., 1983) is a 30-item measure designed to screen for depression in the elderly using a yes/no format.

Age Satisfaction (Michalos et al., 2000) is a single item measure of satisfaction with being one's present age. This item is rated on a 7-point satisfaction scale.

Diener Satisfaction with Life Scale (Diener et al., 1985) is a 5-item measure of life satisfaction that uses a 7-point agreement scale.

Rosenberg Self-Esteem Scale (Rosenberg, 1965) is a 10-item measure of self-esteem that uses a 4-point agreement scale.

RESULTS

Overall Performance

Table 1 shows descriptives for mental status, verbal and visuospatial learning and memory, depression, life satisfaction, self-esteem, and satisfaction with age. An examination of descriptive statistics showed good variability for each of the measures.

Relationships among Learning, Memory, Age, Education, and Mental Status

As seen in **Table 2**, the MTOA:S Word List and Figure learning and memory scores showed low negative correlations with age, nonsignificant correlations with years of education, and moderate positive

correlations with mental status scores.

Relationships among Learning, Memory, and Wellbeing Measures

MTOA:S Word List and Figure learning and memory scores showed nonsignificant correlations with scores on the depression, life satisfaction, self-esteem, and age satisfaction measures (see **Table 3**). These findings did not differ significantly by gender.

DISCUSSION

The purpose of this study was to examine the relationships of verbal and visuospatial learning and memory performance to age, education, mental status, and measures of wellbeing in a sample of older adults ages 80-99 years. Moderate negative correlations between age and both MTOA:S Word List and Figure learning and memory scores and low and nonsignificant positive correlations between education and both MTOA:S subtests are consistent with research reported in the MTOA manual where it was found that age, but not education, was a strong contributor to MTOA:S Word List and Figure scores. Not surprisingly, lower mental status scores were associated with lower verbal and visuospatial learning and memory performance.

No significant relationships were found, however, between any of the measures of wellbeing (i.e., depression, life satisfaction, self-esteem, and satisfaction with age) and MTOA:S verbal and visuospatial learning and memory scores. The lack of a notable correlation between depression and verbal learning and memory has been reported by González et al. (2008), although at least three studies with more sophisticated longitudinal designs have found that memory impairment predicted depressive symptoms but not the reverse (Chen et al., 1999; Jajodia & Borders, 2011; Vinkers et al., 2004). Otherwise, little to no published research has examined the relationships among learning, memory, and wellbeing.

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Table 1
Overall Performance on Measures

	Possible Range	Obtained Range	M	s
Mini-Mental State Exam	0-30	19-30	26.3	2.81
MTOA:S Word List Learning	0-30	13-30	24.5	4.32
MTOA:S Word List Memory	0-10	1-10	8.1	2.45
MTOA:S Figure Learning	0-54	5-52	31.1	12.22
MTOA:S Figure Memory	0-18	0-18	11.6	4.91
Geriatric Depression Scale	0-30	0-16	7.0	4.12
Diener Satisfaction with Life Scale	5-35	11-35	26.5	6.01
Rosenberg Self-Esteem Scale	10-40	24-40	30.3	3.60
Satisfaction with Age Item	1-7	2-7	5.8	1.37

Note: Higher scores represent better mental status, better memory performance, higher depressive symptomatology, higher life satisfaction, better self-esteem, and greater satisfaction with age, respectively.

Table 2
Correlations between MTOA:S Word List and Figure with Age, Education, and Mental Status

	Age	Education	MMSE
MTOA:S Word List Learning	-.30**	.06	.49**
MTOA:S Word List Memory	-.26**	.13	.54**
MTOA:S Figure Learning	-.14	.21	.65**
MTOA:S Figure Memory	-.15	.18	.60**

Note: * $p < .05$, ** $p < .01$; Learning = total acquisition across learning trials (Word List learning uses free recall + cued recall).

Table 3
Correlations between MTOA:S Word List and Figure with Measures of Wellbeing

	Depression	Life Satisfaction	Self-Esteem	Age Satisfaction
MTOA:S Word List Learning	-.01	.03	.06	-.10
MTOA:S Word List Memory	-.06	.01	.19	-.11
MTOA:S Figure Learning	-.12	.02	.21	-.09
MTOA:S Figure Memory	-.16	.05	.19	-.11

Note: * $p < .05$, ** $p < .01$; Learning = total acquisition across learning trials (Word List learning uses free recall + cued recall).