



Mild Cognitive Impairment and Mild Cognitive Impairment

Neuropsychological Profiles of Puerto Rican Patients Diagnosed with Dementia

Introduction:

Mild Cognitive Impairment (MCI) is defined as an impairment in one or more cognitive domains or a overall mild decline across cognitive abilities that is more than expected for the individual's age and education, but does not interfere with social or occupational functioning (Peterson et al, 1999, Luis et al 2003.) Recent studies have presented the importance of early detection of MCI as well as the importance of studying cognitive phenotypes and differences among diverse populations. To date there are no studies that describe the neuropsychological performance of Puerto Ricans diagnosed with MCI.

Objectives:

1-Explore and describe the clinical neuropsychological performance of Puerto Rican patients diagnosed with MCI on various measures of verbal memory, verbal learning, verbal fluency, executive functions and depression symptoms.

2-Compare the profile of Puerto Ricans diagnosed with Dementia(MCI) and MCI on measures of verbal memory, executive functions, and depression.

Method:

Study 1: For this retrospective two independent group study we reviewed the records of 68 patients diagnosed with Dementia and MCI (32 with dementia, 36 with MCI) both male(45) and female (23) with mean age 41 years and 12 years of education (SD= 3.2) that were evaluated at the Neurology Section at the Puerto Rico Medical Center (UPR-RCM). MCI was diagnosed with CDR .5. Descriptive Statistics, and frequencies were used to describe the performance of both groups for all tests.

Study 2: A second study compared the mean scores for all tests administered Statistical procedures were conducted with t tests for independent groups. Alternate hypotheses expected significant differences on the scores for both groups.

Table 1: Demographic information on patients with MCI and DEM

Group	Age	Edu.	Gender
MCI	44.0(18.3)	13.72(2.9)	64%Male 46%Fem
DEM	67.20(7.7)	8(2.8)	55%Male 45%Fem

Results:

Table 2: Self Report Measures of Depression for MCI and DEM.

	MCI	DEM
BDI	9.46(10.0)	16.10(6.0)
CES-D	10.50(9.25)	17.20(5.8)*

Table 3: Descriptive Scores and Comparisons (*=.05, **=.001)

	MCI Mean(SD)	DEM Mean(SD)
MMSE	27.00(1.8)	19.50(2.1)*
COWAT-FAS	25.90(13.7)	19.21(10.2)
BNT	35.40(7.8)	33.00(7.3)
RAVLT-TOTAL	36.50(13.6)	25.00(9.2)*
RAVLT-Imm	6.50(4.18)	3.10(5)*
RAVLT-Delay	7.00(4.7)	0.5(7)**
RAVLT-Recog	11.00(3.0)	9.6(1.5)
WMS Logical-Imm	16.00(6.5)	8.20(2.5)**
WMS Logical-Del	12.48(7.3)	3.4(3.5)*
Trails A	51.81(0.9)	145.50(80.1)*
Trails B	139.50(98.9)	180(88.1)

Table 4: Mean Scores by Age of MCI group

	18-29	30-39	40-49	50-65	66-75
MMSE	28(1.2)	28(2)	27(1.3)	27(2.3)	27(2.1)
FAS	22(8.6)	20(3)	37(13.2)	28(12.6)	33(22.6)
WMS-I	18(13.6)	18(4.9)	19(4.2)	18(8.6)	13(3.0)
WMS-ID	13(8.5)	17(2.8)	16(4.3)	12.8(7)	4(4.5)
BNT	46(8.8)	54(5.2)	53(6.4)	37(7.4)	37(7.0)
RAVLT-I	40(11.6)	49(11.1)	40(20.8)	32(11.7)	24(8.8)
RAVLT-I	8(4.3)	9(4.2)	7(4.5)	4(3.2)	6(5.5)
RAVLTd	10(4.3)	8(2.8)	8(6.5)	4(6.2.8)	3(4.6)
Trails-A	42(17.2)	41(11)	53(17.9)	70(29.1)	56(12.3)
Trails-B	104(44)	110(59)	96(50)	250(97)	135(56.5)

Results (Continued):

1- As a group MCI patients tended to be younger and presented more years of formal education.

2- DEM group reported more symptoms of depression than MCI on CES-D.

3- Significant Differences were found between MCI and DEM on RAVLT- Total, Immediate and Delayed, as well as on WMS 1, WMS 2, and Trails A.

4- Non significant differences were observed in FAS, Trails B and BDI.

Conclusions:

As expected the MCI group obtained significantly higher scores on immediate and delayed verbal learning, verbal memory, planning and processing of simple stimuli.

Interestingly, MCI and DEM group did not show a significant differences on verbal fluency, semantic memory, and more complex planning and executive functions.

Age categories for the MCI group shows interesting patterns of performance on MMSE, WMS Immediate and Delayed and Verbal Learning (RAVLT) and on simple planning and executive functions.

References:

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