

INTRODUCTION

With the aging of the population and the rising of retirement age, it is important to consider the cognitive abilities of older workers. Models of normal aging show a cognitive decline with advancing age. Among these, executive functions begin to decline after the second or third decade of life.

Some studies assume the existence of a mechanism for the preservation of cognitive functions. This preservation is the result of regular and consistent use of these cognitive functions (Marquié, 1997; Salthouse, 1990). To verify this hypothesis, we have developed a study on the evolution of executive functions with age among conference interpreters.

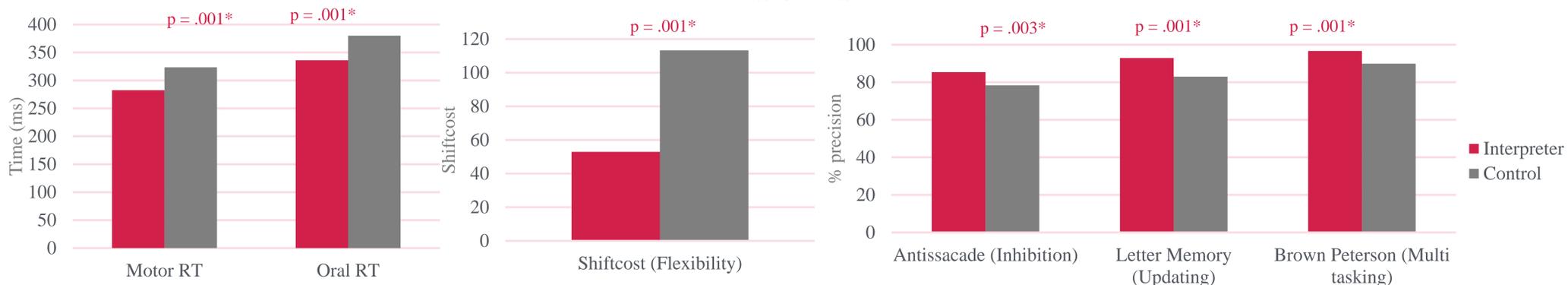
PARTICIPANTS

	Interpreters (n = 60)	Monolingual (n = 60)
Age (n)		
25-34	15	15
35-44	15	15
45-54	15	15
55-65	15	15
Gender (Men / Women)	23 / 37	29 / 31
Educational levels (years completed)	16.58 +/- 1.39	16.7 +/- 1.23

TASKS

- A Computer-based Brown Peterson (Multitasking).
- Two tasks of reaction times (Motor – Oral).
- Tasks from the model of executive functions (Miyake et al., 2000) on E Prime 2.0
 - Letter Memory (Updating)
 - Plus-Minus (Flexibility)
 - Antisaccade (Inhibition).

RESULTS



The performance of interpreters are significantly higher for all tests assessing executive functions. Interpreters are significantly faster at different reaction times (motor and oral). How do these results change with age ?

	Motor RT	Oral RT	Multi tasking	Updating	Flexibility	Inhibition
Int – Cont 25-34	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Int – Cont 35-44	$p = .029^*$	$p = .04^*$	$p = .016^*$	$p = .001^*$	$p = .007^*$	N.S.
Int – Cont 45 – 54	$p = .007^*$	$p = .004^*$	$p = .01^*$	$p = .001^*$	$p = .04^*$	N.S.
Int – Cont 55 – 65	$p = .001^*$	$p = .001^*$	$p = .001^*$	$p = .001^*$	$p = .002^*$	$p = .02^*$

Inter-group comparison (Int = interpreters ; Cont = control)

DISCUSSION

Before age 35, there is no significant difference between the groups because there is a peak of performance on tests assessing executive functions between 25 and 35 years. Our results suggest that the characteristics of the activity of interpretation could slow the normal cognitive decline. This can be interpreted by the effects of the work activity or through bilingualism. We test a group of translators to verify this last hypothesis.