

THE EFFECTS OF PC-BASED TRAINING IN APHASIA POST-STROKE: A CASE STUDY.

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Introduction.

Numerous computer applications have been developed specifically for aphasia rehabilitation (1). Real and potential applications of computer technology are discussed in the context of computerized aphasia treatment for adults with chronic aphasia (2).

Computer-based cognitive and language rehabilitation, using proper and dedicated software, may be a valuable tool in improving either communication or cognitive skills in patient affected by aphasia, even in the chronic state (3).

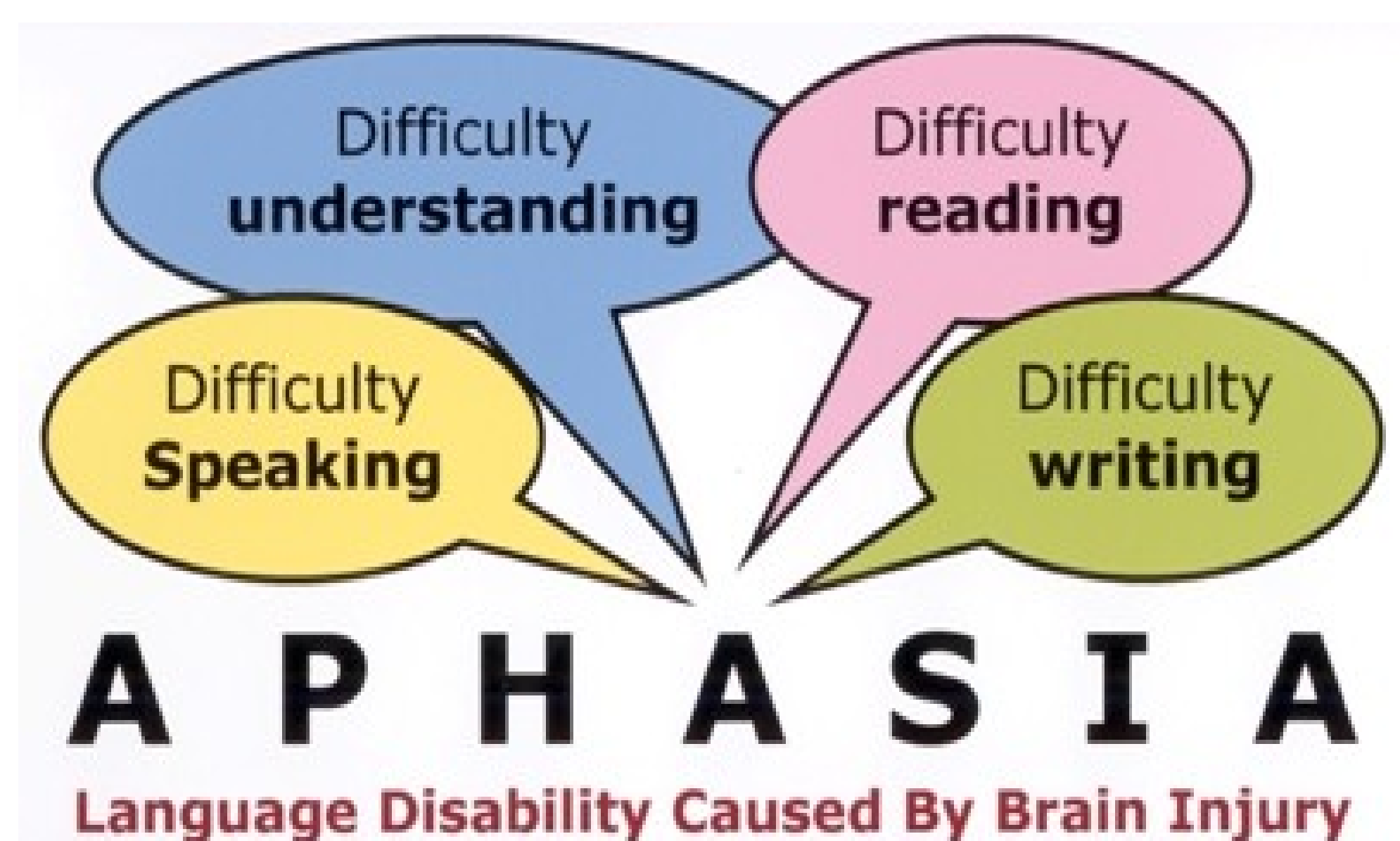
Methods. A 46-year-old man, affected by post stroke severe expressive aphasia, underwent two different intensive rehabilitation trainings, including either standard language rehabilitation alone or a proper PC based speech training in addition to standard treatment. We evaluated his neuropsychological profile, before and after the two different trainings, by using a proper psychometric battery (Token test, Attention Matrices(AM), Ideo-motor praxia, neuropsychological examination for aphasia (ENPA), Hamilton Rating Scale for Depression and COPE-NIV) to assess cognitive status, language abilities, and to estimate the presence of mood alterations and coping strategies. The overall PC-program was articulated in 6 sessions/weekly for 3 months.

Results. Only at the end of the PC-training, we have observed an important improvement in peculiar cognitive domains (see table n.1);(in attention, in constructive and ideo-motor praxia), language abilities such as denomination, verbal understanding, written, in communication skills as well as an optimization of the mood and coping styles.

Conclusion. PC cognitive and language training, using proper and dedicated software, may be a valuable tool in improving either communication or cognitive skills in subjects affected by non fluent aphasia, even in the chronic state.

Table1. Comparison of language and psychometric measures at T0-T1-T2-T3; mean raw data are reported.

TEST	COGNITIVE DOMAIN	T0		T1		T2		T3	
		sx	dx	sx	dx	sx	dx	sx	dx
Token test	Verbal Understanding	5,5		5,5		6,5		20,25	
Attention Matrices (AM)	Attention	7,5		8		10,5		13,5	
Ideo-motor praxia	Apraxia	8	0	8	0	14	0	18	0
E.N.P.A.	Language Understanding	9,4		10,4		11,4		18,4	
	Language Writen	0		0		2,7		4,7	
	Language Repetion	0		0		0		5,8	
	Language Denomination	0		0		0		4	
Hamilton Rating Scale for Depression	Depression symptoms	27		22		11		11	
COPE-NIV	Social support	15		17		17		20	
	Voidance strategies	26		25		23		21	
	Positive attitude	20		20		20		22	
	Problem Solving	20		23		23		25	
	Turning to religion	24		24		24		24	



References

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