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Le parole in NeuroPsicogeriatria

Approcci non convenzionali
nella cura della Persona con Demenza:
Superare gli stereotipi negativi

Saronno, 21 settembre 2018

Navigando nella mente e nei congressi

- Emozioni e linguaggio
- Aspetti relazionali
- Aging well (biologia, clinica, psicosociale)
- Delirium
- Riserva e Resilienza Cognitiva
- Disturbo soggettivo della memoria
- Fragilità

……

OVVIETA’

Le parole in medicina sono fondamentali: non solo sono indispensabili per la **comunicazione**, ma contribuiscono in modo decisivo ai **costruttivi cognitivi**

Di fatto, sono l’ossatura dell’ontologia del sapere medico ed orientano i **processi decisionali,** talora configurando **trappole** cognitive.

"La lingua è una geniale convenzione; le parole significano qualcosa solo perché siamo tutti d’accordo che ciò debbano significare"

Le parole
della
NeuroPsicogeriatria

Le parole
nella
NeuroPsicogeriatria

Le parole
della
NeuroPsicogeriatria

Agi(e)ng Brain
o
Brain Agi(e)ng

Biologia? Cultura?
Personalità?

Inflammation, But Not Telomere Length, Predicts Successful Ageing at Extreme Old Age: A Longitudinal Study of Semi-supercentenarians

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A B S T R A C T

To determine the most important drivers of successful ageing at extreme old age, we combined community-based prospective cohorts: Tokyo Oldest Old Survey on Total Health (TOOTH), Tokyo Centenarians Study (TCS) and Japanese Semi-Supercentenarians Study (JSS) comprising 1554 individuals including 684 centenarians and (semi-)supercentenarians, 167 pairs of centenarian offspring and spouses, and 536 community-living very old (85 to 99 years). We combined z scores from multiple biomarkers to describe haematopoiesis, inflammation, lipid and glucose metabolism, liver function, renal function, and cellular senescence domains. In Cox proportional hazard models, inflammation predicted all-cause mortality with hazard ratios (95% CI) 1.89 (1.21 to 2.95) and 1.36 (1.05 to 1.78) in the very old and (semi-)supercentenarians, respectively. In linear forward stepwise models, inflammation predicted capability (10.8% variance explained) and cognition (8·6% variance explained) in (semi-)supercentenarians better than chronologic age or gender. The inflammation score was also lower in centenarian offspring compared to age-matched controls with Δ (95% CI) = −0.795 (−1.436 to −0.154). Centenarians and their offspring were able to maintain long telomeres, but telomere length was not a predictor of successful ageing in centenarians and semi-supercentenarians. We conclude that inflammation is an important malleable driver of ageing up to extreme old age in humans.

Le parole, IN PRATICA:

- L’idea che il "successfull ageing" sia correlato in modo univoco a pochi "elementi forti" è da rimeditare
- In questo lavoro "l’infiammazione" (misurata in modo rigoroso) pesa più della lunghezza dei telomeri, e soprattutto appare modificabile

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A Culture-Brain Link: Negative Age Stereotypes Predict Alzheimer's-disease Biomarkers

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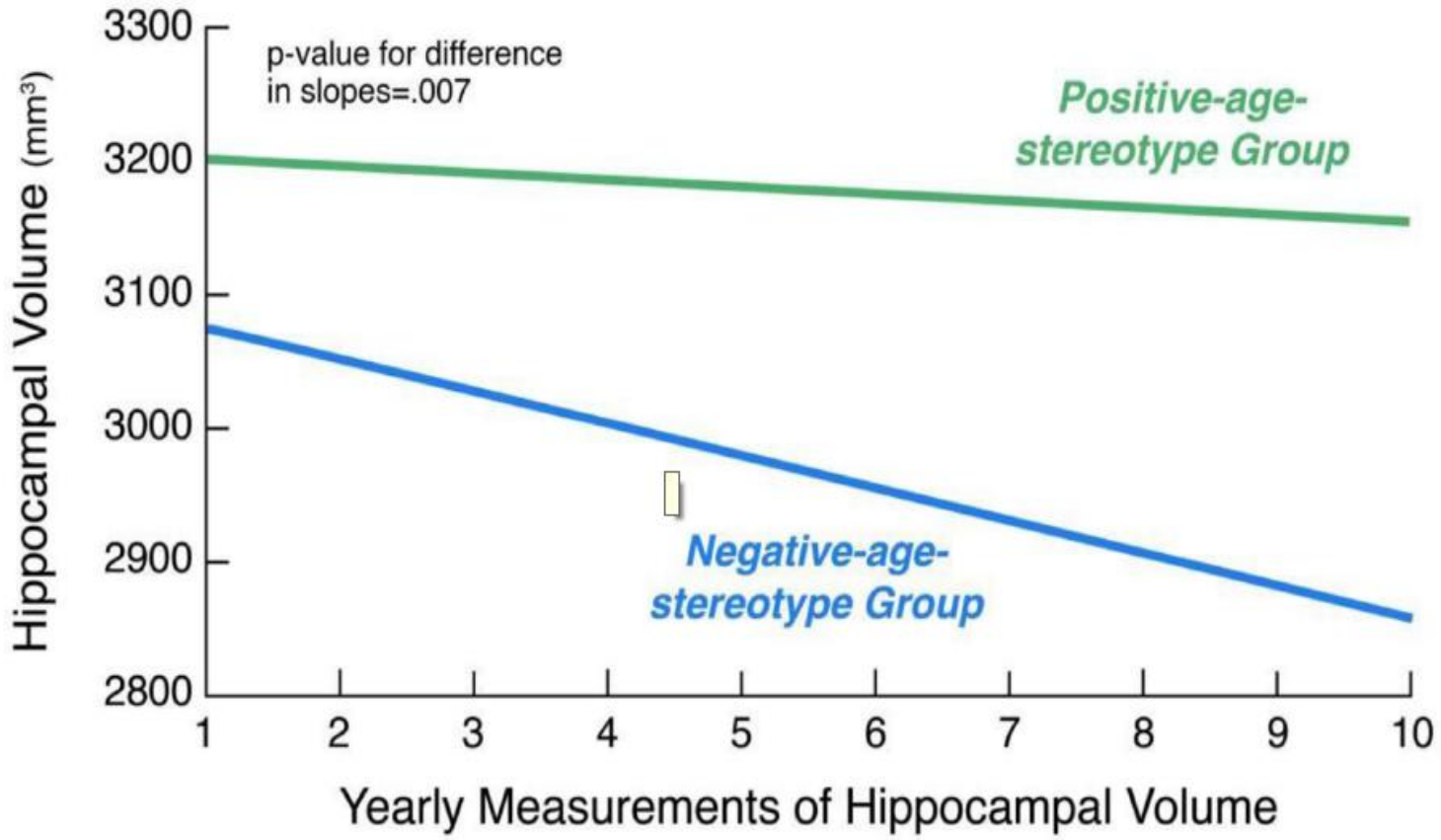
Abstract

Although negative age stereotypes have been found to predict adverse outcomes among older individuals, it was unknown whether the influence of stereotypes extends to brain changes associated with Alzheimer's disease. To consider this possibility, we drew on the age stereotypes of dementia-free participants in the Baltimore Longitudinal Study of Aging that had been measured decades before yearly MRIs and brain autopsies were performed. Those with more negative age stereotypes earlier in life had significantly steeper hippocampal-volume loss, and significantly greater accumulation of neurofibrillary tangles and amyloid plaques at autopsy, adjusting for relevant covariates. These findings suggest a new pathway to identifying mechanisms and potential interventions related to the neuropathology of Alzheimer's disease.



Levy et al 2016

Le parole, in pratica

- Gli stereotipi negativi, misurati anche molti anni prima della vecchiaia, influenzano i principali marcatori neurodegenerativi

cioè

LA MENTE agisce sulla biologia cerebrale

Original Research Report

On the Inevitability of Aging: Essentialist Beliefs Moderate the Impact of Negative Age Stereotypes on Older Adults' Memory Performance and Physiological Reactivity

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Decision Editor: Bob G. Knight, PhD

Abstract

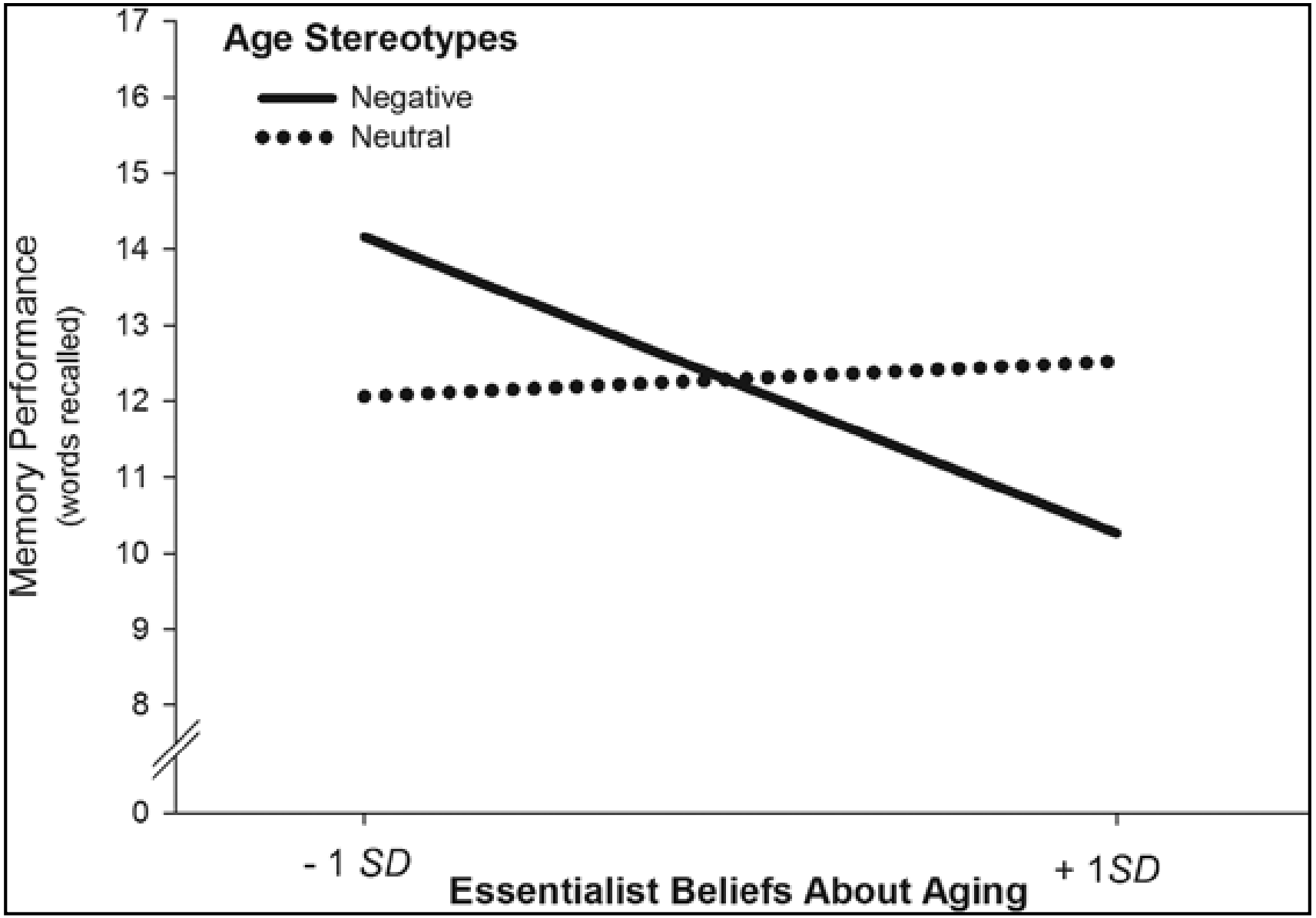
Objectives: The goal of this research was to investigate how individual differences in essentialist beliefs about aging affect how older adults' respond to negative age stereotypes. Essentialist beliefs about aging (EBA) define the process of aging as fixed and inevitable rather than malleable and modifiable.

Method: Two experiments including older adults tested the hypothesis that EBA moderate the effect of negative age stereotypes on older adults' memory performance and physiological reactivity.

Results: In line with predictions, results of Experiment 1 (N = 79, 61–87 years) showed that for older adults with strong EBA, the activation of negative age stereotypes (vs neutral information) led to stereotype assimilation entailing a poorer memory performance. In contrast, for older adults with non-EBA, the activation of negative age stereotypes led to stereotype reactance entailing a better memory performance. Experiment 2 (N = 41; 65–92 years) replicated this pattern and also showed that older adults who endorsed rather than rejected EBA exhibited increased systolic blood pressure reactivity when negative age stereotypes were activated.

Discussion: The discussion focuses on pathways through which age stereotypes impact cognitive performance and health in later adulthood, as well as ways to stimulate positive plasticity by changing EBA.

Keywords: Essentialist beliefs about aging—Memory—Negative age stereotypes—Physiological reactivity—Reactance—Threat


Age Stereotypes
Negative
Neutral
Memory Performance
(words recalled)
17
16
15
14
13
12
11
10
9
8
0
- 1 SD
+ 1SD
Essentialist Beliefs About Aging

Weiss, 2016

Le parole, in pratica

- l'essenzialismo definisce l'invecchiamento come processo "prefissato" ed "inevitabile"
- lo stereotipo negativo influenza le performance cognitive (ad es. la memoria)
- modificare gli stereotipi può stimolare risposte positive, clinicamente significative?

APATIA

Apatia: criteri diagnostici

Table 1
Diagnostic criteria for apathy (adapted from Marin (1991)).

A. Lack of motivation relative to the patient's previous level of functioning or the standards of his or her age and culture as indicated either by subjective account or observation by others.

B. Presence, while with lack of motivation, of at least 1 symptom belonging to each of the following three domains:

Diminished goal-directed behavior.

1. Lack of effort.
2. Dependency on others to structure activity.

Diminished goal-directed cognition

3. Lack of interest in learning new things, or in new experiences.
4. Lack of concern about one's personal problems.

Diminished concomitants of goal-directed behavior.

5. Unchanging affect.
6. Lack of emotional responsivity to positive or negative events.

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to diminished level of consciousness or the direct physiological effects of a substance (e.g., a drug of abuse, a medication).

Short communication

Prevalence and cognitive underpinnings of isolated apathy in young healthy subjects

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ABSTRACT

Background: Apathy is well described in neurodegenerative conditions, however to date there is no evidence of significant isolated apathy in subjects free from other neurological and psychiatric co-morbidites. Identifying isolated apathy in subjects free from neuropsychiatric conditions could contribute to refining current concepts of apathy and reevaluate its nosological classification as an independent clinical syndrome.

Methods: We assessed apathy and perceived quality of life in a group of 2751 adults (age 19–40 years) free from neuropsychiatric or medical conditions. Subjects with and without elevated apathy were compared on measures of depression, self-efficacy, behavioral inhibition, and behavioral activation.

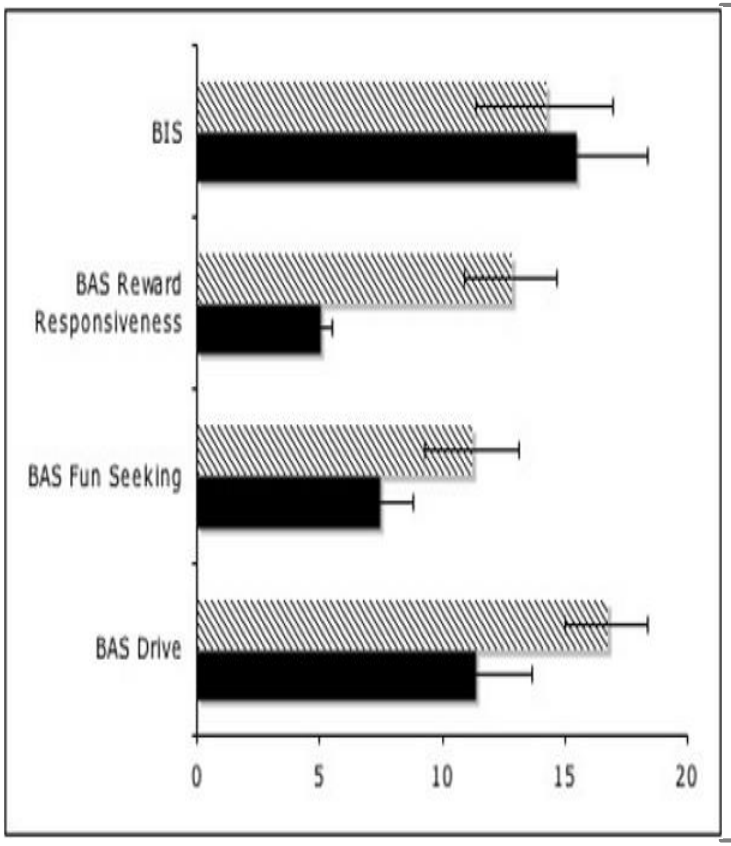
Results: Observed prevalence of isolated elevated apathy was 1.45%. Subjects with apathy presented with reduced quality of life and lower behavioral activation compared to apathy-free subjects, while there was no difference between the two groups on measures of depression, self-efficacy, and perceived social skills.

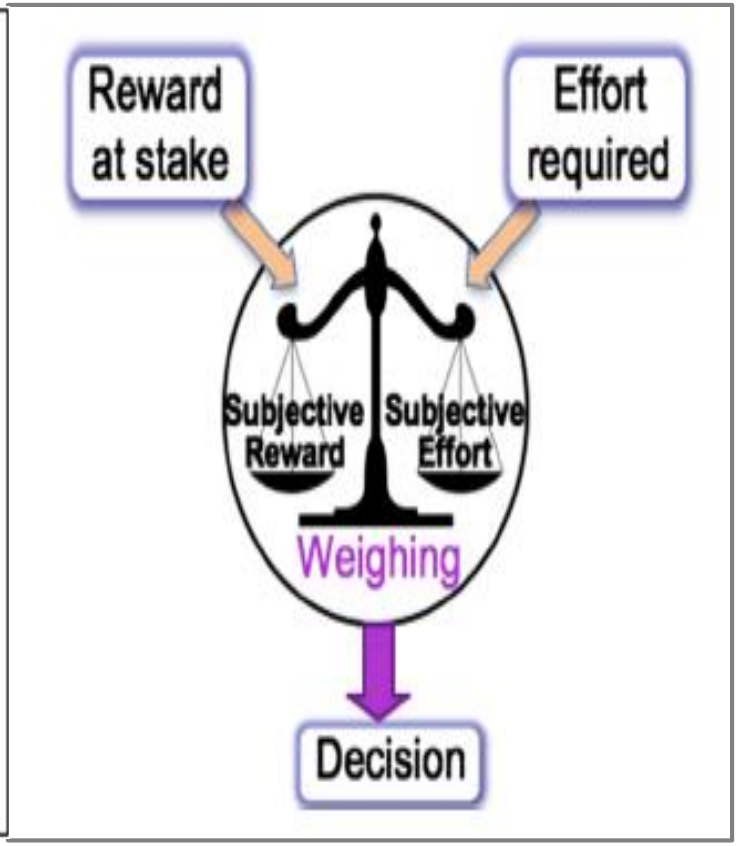
Limitations: The main limitation of this study is the use of self-report questionnaires.

Conclusions: Isolated, ecologically-relevant apathy can be found in adults independently from the presence of subclinical depression or of concurrent medical conditions. Apathy screening should be considered in the evaluation of young non-depressed subjects with reduced perceived quality of life.

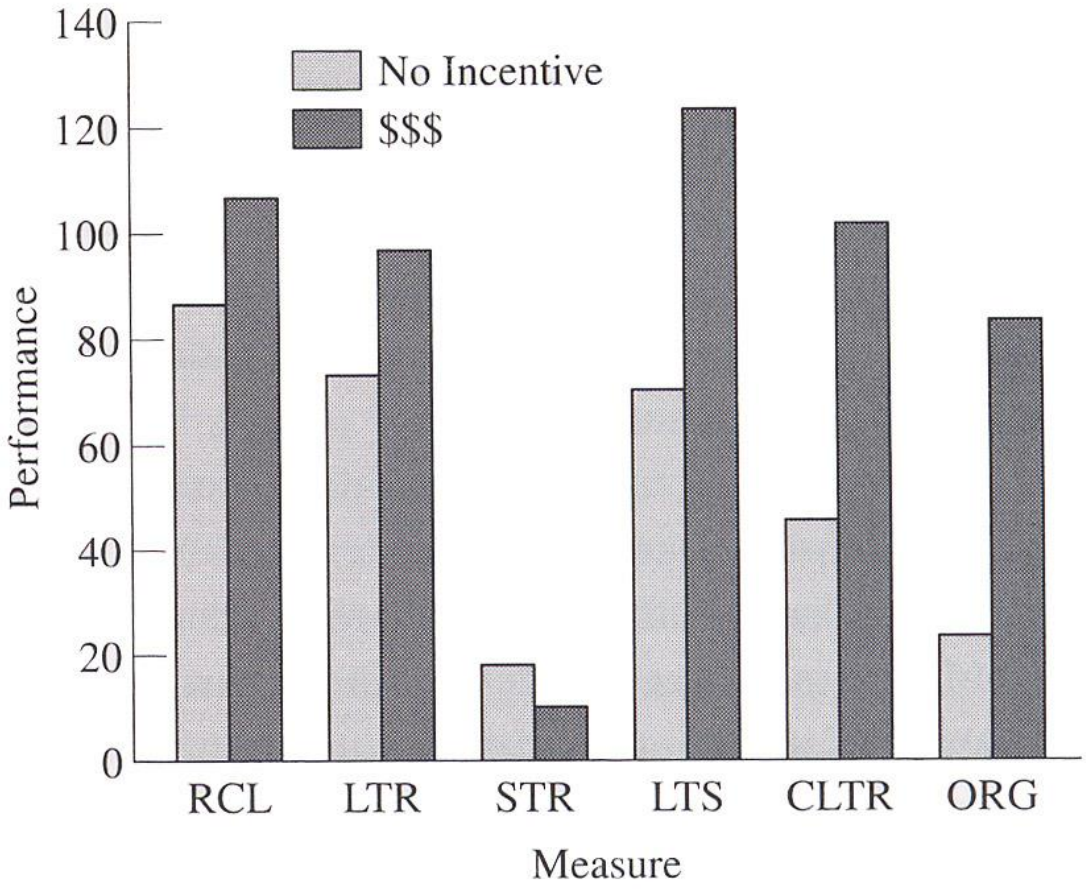
•La difficoltà della diagnosi differenziale: l’apatia

Nei soggetti non depressi, l'apatia è associata a una ridotta sensibilità al reward (barre nere nel grafico a sx) (Pardini et al., 2015), che a sua volta è collegata all’innervazione dopaminergica prefrontale. Lobo frontale come crocevia tra apatia e depressione





Rapporto tra MOTIVAZIONE e PRESTAZIONE



Prigatamo, 2000

Le parole, in pratica

- Ridotti livelli di motivazione possono influenzare la diagnosi di deterioramento cognitivo

- la diagnosi è dunque un processo <u>complesso e specialistico</u>

MCI E MBI

Quali costrutti?

Disturbo Neurocognitivo maggiore /lieve (ex MCI)

A) Evidenza di significativo declino cognitivo da un <u>precedente</u> livello di prestazione, basato su

- preoccupazione del soggetto, informatore o clinico
- significativa compromissione cognitiva, preferibilmente documentata da test neuropsicologici tarati (o valutazione clinica quantificata)

B) Interferenze nella vita quotidiana

SE NON interferenze, DN lieve (ex MCI)

C) No delirium

D) No altro disturbo mentale

Disturbo Differenziale Disturbo Neurocognitivo

1) Funzioni cognitive normali

2) Delirium

3) Disturbo depressivo maggiore

4) Disturbo specifico apprendimento e altri disturbi neuro sviluppo

JAMA Neurology | Original Investigation

Interpreting Biomarker Results in Individual Patients With Mild Cognitive Impairment in the Alzheimer's Biomarkers in Daily Practice (ABIDE) Project

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IMPORTANCE Biomarkers do not determine conversion to Alzheimer disease (AD) perfectly, and criteria do not specify how to take patient characteristics into account. Consequently, biomarker use may be challenging for clinicians, especially in patients with mild cognitive impairment (MCI).

OBJECTIVE To construct biomarker-based prognostic models that enable determination of future AD dementia in patients with MCI.

DESIGN, SETTING, AND PARTICIPANTS This study is part of the Alzheimer's Biomarkers in Daily Practice (ABIDE) project. A total of 525 patients with MCI from the Amsterdam Dementia Cohort (longitudinal cohort, tertiary referral center) were studied. All patients had their baseline visit to a memory clinic from September 1, 1997, through August 31, 2014. Prognostic models were constructed by Cox proportional hazards regression with patient characteristics (age, sex, and Mini-Mental State Examination [MMSE] score), magnetic resonance imaging (MRI) biomarkers (hippocampal volume, normalized whole-brain volume), cerebrospinal fluid (CSF) biomarkers (amyloid-β1-42, tau), and combined biomarkers. Data were analyzed from November 1, 2015, to October 1, 2016.

MAIN OUTCOMES AND MEASURES Clinical end points were AD dementia and any type of dementia after 1 and 3 years.

MAIN OUTCOMES AND MEASURES Clinical end points were AD dementia and any type of dementia after 1 and 3 years.

RESULTS Of the 525 patients, 210 (40.0%) were female, and the mean (SD) age was 67.3 (8.4) years. On the basis of age, sex, and MMSE score only, the 3-year progression risk to AD dementia ranged from 26% (95% CI, 19%-34%) in younger men with MMSE scores of 29 to 76% (95% CI, 65%-84%) in older women with MMSE scores of 24 (1-year risk: 6% [95% CI, 4%-9%] to 24% [95% CI, 18%-32%]). Three- and 1-year progression risks were 86% (95% CI, 71%-95%) and 27% (95% CI, 17%-41%) when MRI results were abnormal, 82% (95% CI, 73%-89%) and 26% (95% CI, 20%-33%) when CSF test results were abnormal, and 89% (95% CI, 79%-95%) and 26% (95% CI, 18%-36%) when the results of both tests were abnormal. Conversely, 3- and 1-year progression risks were 18% (95% CI, 13%-27%) and 3% (95% CI, 2%-5%) after normal MRI results, 6% (95% CI, 3%-9%) and 1% (95% CI, 0.5%-2%) after normal CSF test results, and 4% (95% CI, 2%-7%) and 0.5% (95% CI, 0.2%-1%) after combined normal MRI and CSF test results. The prognostic value of models determining any type of dementia were in the same order of magnitude although somewhat lower. External validation in Alzheimer's Disease Neuroimaging Initiative 2 showed that our models were highly robust.

CONCLUSIONS AND RELEVANCE This study provides biomarker-based prognostic models that may help determine AD dementia and any type of dementia in patients with MCI at the individual level. This finding supports clinical decision making and application of biomarkers in daily practice.

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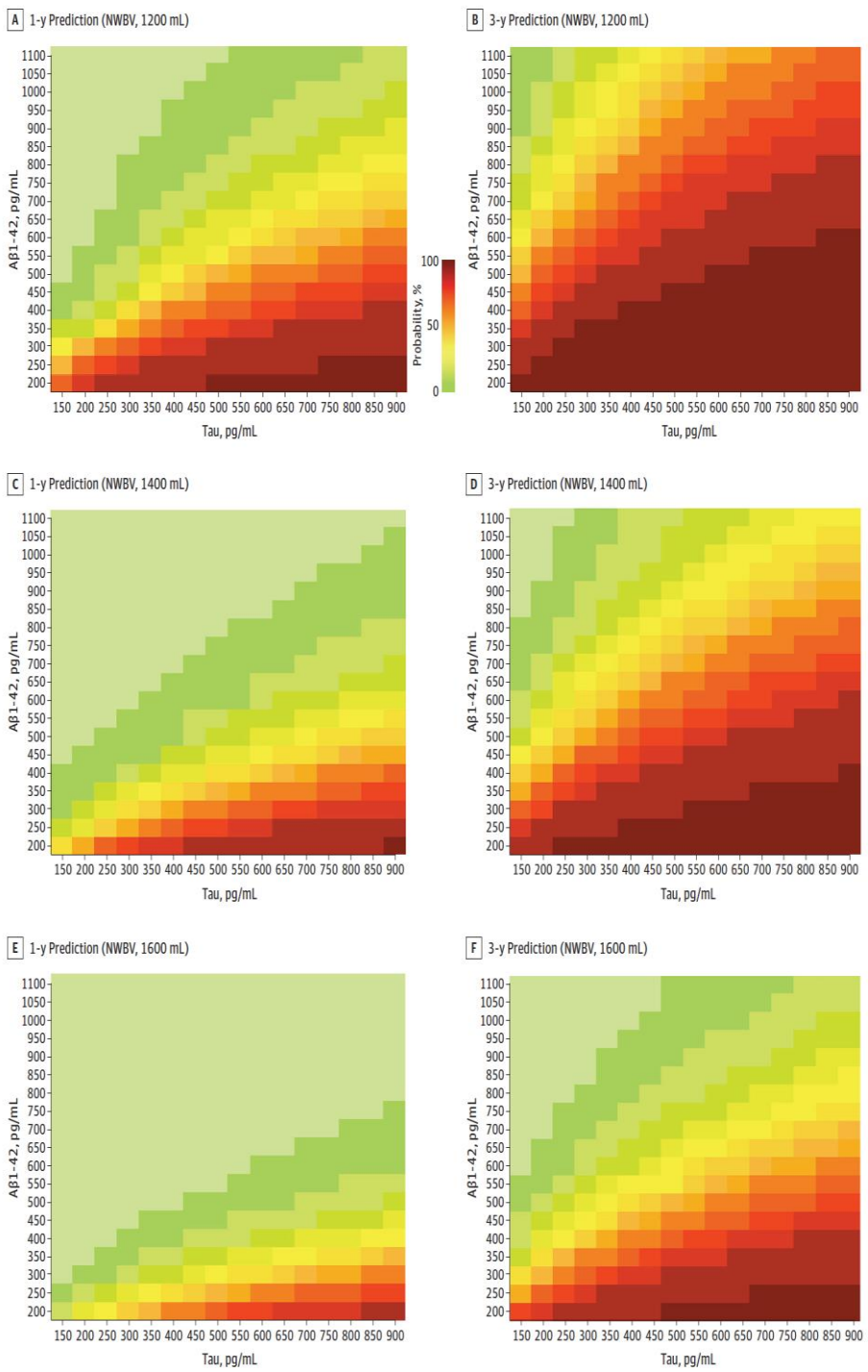
Table 4. Probability of Conversion for Patients With Mild Cognitive Impairment: Combined Model[a]

Biomarker Combination							
MRI Biomarkers		CSF Biomarkers		MMSE Score at 1-y Follow-up		MMSE Score at 3-y Follow-up	
HCV	NWBV	Aβ1-42	Tau	29	24	29	24
–	–	–	–	0.5 (0.2-1.0)	0.9 (0.3-2.0)	4.0 (2.0-7.0)	6.0 (2.0-13.0)
+	–	–	–	0.5 (0.2-1.0)	1.0 (0.3-2.0)	4.0 (1.0-8.0)	6.0 (3.0-14.0)
–	+	–	–	1.0 (0.2-3.0)	2.0 (1.0-4.0)	6.0 (3.0-14.0)	11.0 (5.0-24.0)
–	–	+	–	3.0 (2.0-6.0)	5.0 (3.0-10.0)	20.0 (12.0-31.0)	32.0 (20.0-48.0)
–	–	–	+	7.0 (3.0-13.0)	11.0 (6.0-21.0)	39.0 (24.0-60.0)	57.0 (36.0-80.0)
+	+	–	–	1.0 (0-3.0)	2.0 (1.0-4.0)	7.0 (3.0-16.0)	12.0 (5.0-26.0)
+	–	+	–	4.0 (2.0-7.0)	6.0 (3.0-11.0)	22.0 (13.0-36.0)	34.0 (22.0-52.0)
+	–	–	+	7.0 (4.0-14.0)	12.0 (7.0-22.0)	42.0 (25.0-65.0)	60.0 (40.0-82.0)
–	+	+	–	6.0 (3.0-11.0)	10.0 (5.0-17.0)	36.0 (24.0-52.0)	53.0 (36.0-72.0)
–	+	–	+	13.0 (7.0-24.0)	22.0 (12.0-38.0)	64.0 (43.0-84.0)	83.0 (61.0-96.0)
–	–	+	+	8.0 (5.0-14.0)	13.0 (8.0-20.0)	43.0 (31.0-58.0)	61.0 (46.0-77.0)
+	+	+	–	6.0 (4.0-12.0)	11.0 (6.0-18.0)	38.0 (25.0-55.0)	56.0 (40.0-74.0)
+	+	–	+	15.0 (8.0-26.0)	23.0 (14.0-39.0)	68.0 (47.0-87.0)	85.0 (67.0-96.0)
+	–	+	+	9.0 (5.0-14.0)	14.0 (9.0-21.0)	46.0 (32.0-63.0)	65.0 (50.0-79.0)
–	+	+	+	15.0 (9.0-24.0)	24.0 (15.0-36.0)	69.0 (54.0-83.0)	86.0 (72.0-95.0)
+	+	+	+	16.0 (14.0-35.0)	26.0 (18.0-36.0)	72.0 (58.0-84.0)	89.0 (79.0-95.0)

Abbreviations: Aβ1-42, amyloid-β1-42; CSF, cerebrospinal fluid; HCV, hippocampal volume; MMSE, Mini-Mental State Examination; MRI, magnetic resonance imaging; NWBV, normalized whole-brain volume.

[a] Biomarker values were selected as 80th percentile (normal [–]) and 20th percentile (abnormal [+]); for tau, the 20th percentile was selected as normal (–) and the 80th percentile as abnormal (+). This table is an example because the model can provide individualized risk estimates for any given value.



Van Maurik et al., 2017

Alzheimer's & Dementia 14 (2018) 535-562

2018 National Institute on Aging—Alzheimer's Association (NIA-AA) Research Framework

NIA-AA Research Framework: Toward a biological definition of Alzheimer's disease

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In 2011, the National Institute on Aging and Alzheimer's Association created separate diagnostic recommendations for the preclinical, mild cognitive impairment, and dementia stages of Alzheimer's disease. Scientific progress in the interim led to an initiative by the National Institute on Aging and Alzheimer's Association to update and unify the 2011 guidelines. This unifying update is labeled a "research framework" because its intended use is for observational and interventional research, not routine clinical care. In the National Institute on Aging and Alzheimer's Association Research Framework, Alzheimer's disease (AD) is defined by its underlying pathologic processes that can be documented by postmortem examination or *in vivo* by biomarkers. The diagnosis is not based on the clinical consequences of the disease (i.e., symptoms/signs) in this research framework, which shifts the definition of AD in living people from a syndromal to a biological construct. The research framework focuses on the diagnosis of AD with biomarkers in living persons. Biomarkers are grouped into those of β amyloid deposition, pathologic tau, and neurodegeneration [AT(N)]. This

ATN classification system groups different biomarkers (imaging and biofluids) by the pathologic process each measures. The AT(N) system is flexible in that new biomarkers can be added to the three existing AT(N) groups, and new biomarker groups beyond AT(N) can be added when they become available. We focus on AD as a continuum, and cognitive staging may be accomplished using continuous measures. However, we also outline two different categorical cognitive schemes for staging the severity of cognitive impairment: a scheme using three traditional syndromal categories and a six-stage numeric scheme. It is important to stress that this framework seeks to create a common language with which investigators can generate and test hypotheses about the interactions among different pathologic processes (denoted by biomarkers) and cognitive symptoms. We appreciate the concern that this biomarker-based research framework has the potential to be misused. Therefore, we emphasize, first, it is premature and inappropriate to use this research framework in general medical practice. Second, this research framework should not be used to restrict alternative approaches to hypothesis testing that do not use biomarkers. There will be situations where biomarkers are not available or requiring them would be counterproductive to the specific research goals (discussed in more detail later in the document). Thus, biomarker-based research should not be considered a template for all research into age-related cognitive impairment and dementia; rather, it should be applied when it is fit for the purpose of the specific research goals of a study. Importantly, this framework should be examined in diverse populations. Although it is possible that β-amyloid plaques and neurofibrillary tau deposits are not causal in AD pathogenesis, it is **these abnormal protein deposits** that **define AD as a unique neurodegenerative disease** among different disorders that can lead to dementia. We envision that defining AD as a biological construct will enable a more accurate characterization and understanding of the sequence of events that lead to cognitive impairment that is associated with AD, as well as the multifactorial etiology of dementia. This approach also will enable a more precise approach to interventional trials where specific pathways can be targeted in the disease process and in the appropriate people.

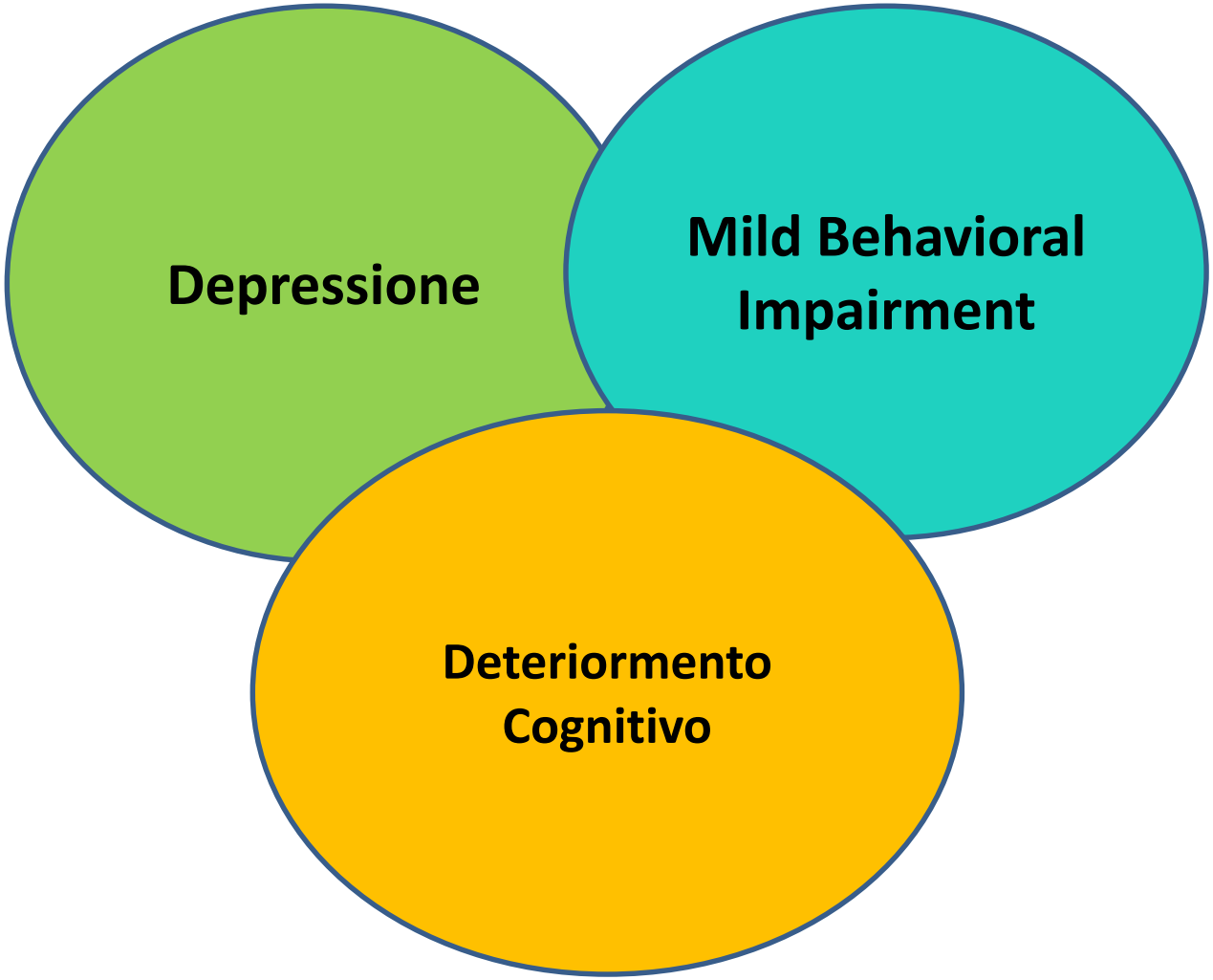
Risk of short-term cognitive decline based on the biomarkers profile and cognitive stage

		Syndromal Cognitive Stage		
		Cognitively unimpaired	**MCI**	**dementia**
Biomarker Profile	$A^- T^- (N)^-$	normal AD biomarkers, cognitively unimpaired	normal AD biomarkers with MCI	normal AD biomarkers with dementia
	$A^+ T^- (N)^-$	Preclinical Alzheimer's pathologic change	Alzheimer's pathologic change with MCI	Alzheimer's pathologic change with dementia
	$A^+ T^- (N)^+$	Alzheimer's and concomitant suspected non Alzheimer's pathologic change, cognitively unimpaired	Alzheimer's and concomitant suspected non Alzheimer's pathologic change with MCI	Alzheimer's and concomitant suspected non Alzheimer's pathologic change with dementia
	$A^+ T^+ (N)^-$	Preclinical Alzheimer's disease	Alzheimer's disease with MCI (Prodromal AD)	Alzheimer's disease with dementia
	$A^+ T^+ (N)^+$			

Non-Alzheimer's continuum profiles are not included in table because the risk associated with different combinations of T+(N)-, T+(N)+, T-(N)+ among A- individuals has not been established

- rate of short term clinical progression expected to be low
- rate of short term clinical progression expected to be high

Jack et al, 2018


Depressione
Mild Behavioral Impairment
Deteriormento Cognitivo

Mild Behavioral Impairment, un nuovo construtto?

Neuropsychiatric symptoms and Quality of Life in patients with very mild and mild Alzheimer's disease

Table 2 Prevalence of neuropsychiatric symptoms

Int J Geriatr Psychiatry 2011; **26**: 473–482.

	All ($n = 240$) %	CDR 0.5 ($n = 81$) %	CDR 1 or 2 ($n = 159$) %
At least one symptom	82.1	76.5	84.9
Delusions	22.5	17.3	25.2
Hallucinations	15.4	16.0	15.1
Agitation	29.6	23.5	32.7
Depression	37.1	32.1	39.6
Anxiety	25.8	28.4	24.5
Euphoria	5.8	4.9	6.3
Apathy	47.9	49.4	47.2
Disinhibition	14.6	18.5	12.6
Irritability	34.2	33.3	34.6
Aberrant motor behavior	18.8	16.0	20.1
Sleep	13.9	11.1	15.3
Eating	25.8	22.2	27.7

K. Karttunen *et al.*

Mild Behavioral Impairment, un nuovo construtto?

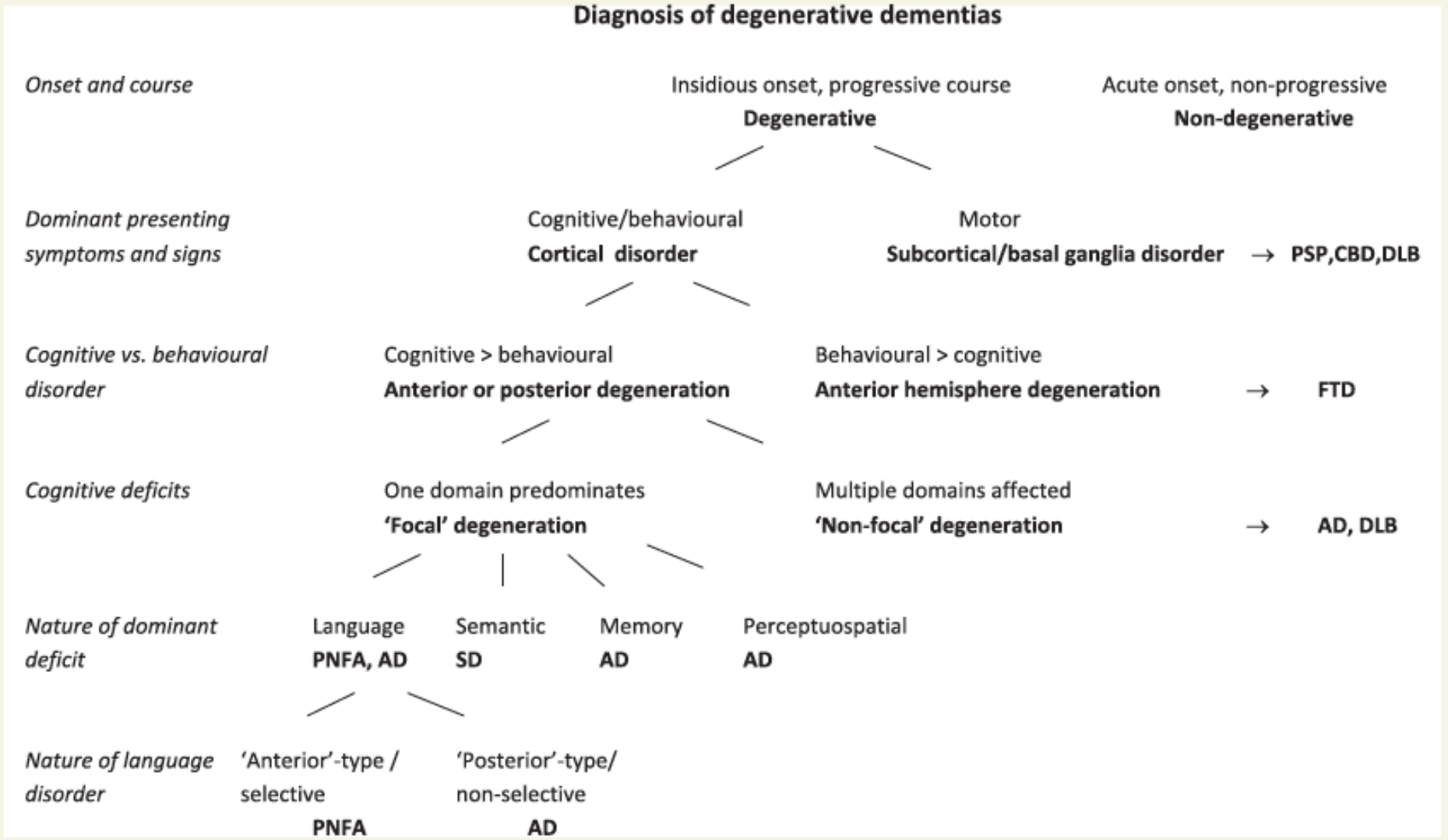


Figure 1 Algorithm for diagnosis of degenerative dementias. AD = Alzheimer's disease; CBD = corticobasal degeneration; DLB = dementia with Lewy bodies; PNFA = progressive supranuclear palsy; PSP = progressive supranuclear palsy; SD = semantic dementia.

(Snowden et al., 2011)

Che cosa è il Mild Behavioral Impairment?

ISTAART-AA MBI Criteria

1 Changes in behavior or personality observed by patient or informant or clinician, starting later in life (age≥50) and persisting at least intermittently for ≥ 6 months. These represent clear change from the person's usual behavior or personality as evidenced by at least one of the following:

- **a.** Decreased motivation (e.g. apathy, aspontaneity, indifference)
- **b.** Affective dysregulation (e.g. anxiety, dysphoria, changeability, euphoria, irritability)
- **c.** Impulse dyscontrol (e.g. agitation, disinhibition, gambling, obsessiveness, behavioral perseveration, stimulus bind)
- **d.** Social inappropriateness (e.g. lack of empathy, loss of insight, loss of social graces or tact, rigidity, exaggeration of previous personality traits)
- **e.** Abnormal perception or thought content (e.g. delusions, hallucinations)

2 Behaviors are of sufficient severity to produce at least minimal impairment in at least one of the following areas:

- **a.** Interpersonal relationships
- **b.** Other aspects of social functioning
- **c.** Ability to perform in the workplace

The patient should generally maintain his/her independence of function in daily life, with minimal aids or assistance.

3 Although co-morbid conditions may be present, the behavioral or personality changes are not attributable to another current psychiatric disorder (e.g. generalized anxiety disorder, major depression, manic or psychotic disorders), traumatic or general medical causes, or the physiological effects of a substance or medication.

4 The patient does not meet criteria for a dementia syndrome (e.g., Alzheimer's dementia, frontotemporal dementia, dementia with Lewy bodies, vascular dementia, other dementia). Mild Cognitive Impairment (MCI) can be concurrently diagnosed with Mild Behavioral Impairment.

Che cosa è il Mild Behavioral Impairment?

Table 1. ISTAART mild behavioral impairment domain matrix

	ISTAART MBI DOMAINS				
	Decreased Motivation	Affective Dysregulation	Impulse Dyscontrol	Social Inappropriateness	Abnormal Perception or Through Content
NPI domains	G. apathy/ indifference	D. depression/ dysphoria	C. agitation/aggression	H. disinhibition	A. delusions
		E. anxiety	I. irritability/lability		B. hallucinations
		F. elation/ euphoria	J. aberrant motor behavior		

Frequenza del Mild Behavioral Impairment

Prevalence estimates of mild behavioral impairment in a population-based sample of pre-dementia states and cognitively healthy older adults

International Psychogeriatrics

M. E. Mortby *et al.*

Methods: MBI was assessed in 1,377 older (age range 72–79 years; 52% male; MCI ;= 133; cognitively normal, but-at-risk = 397; cognitively healthy = 847). MBI was assessed in accordance with the ISTAART-AA diagnostic criteria for MBI using the neuropsychiatric inventory.

Results: 34.1% of participants met the criteria for MBI. High prevalence of MBI across the cognitive spectrum was reported (48.9% vs. 43.1% vs. 27.6%). Irrespective of level of cognitive impairment, impulse dyscontrol (33.8% vs. 28.7% vs. 17.2%) and decreased motivation (32.3% vs. 26.2% vs. 16.3%) were the most frequently met MBI domains. MBI was more prevalent in men ($\chi^2 = 4.98$, $p = 0.026$), especially the domains of decreased motivation and impulse dyscontrol.

Le parole, IN PRATICA

- MCI costrutto fluttuante
  (conversione fino a 30%)

- MBI costrutto più stabile

- Ruolo della Clinica (Anamnesi)

NEUROPLASTICITA'

(RISERVA CEREBRALE
E
RISERVA COGNITIVA)

Effects of Age on Brain Activation During Auditory-Cued Thumb-to-Index Opposition

A Positron Emission Tomography Study

C. Calautti, MD; C. Serrati, MD; J-C. Baron, MD

Background and Purpose—Available data indicate a decline in fine finger movements with aging, suggesting changes in central motor processes. Thus far no functional neuroimaging study has assessed the effect of age on activation patterns during finger movement.

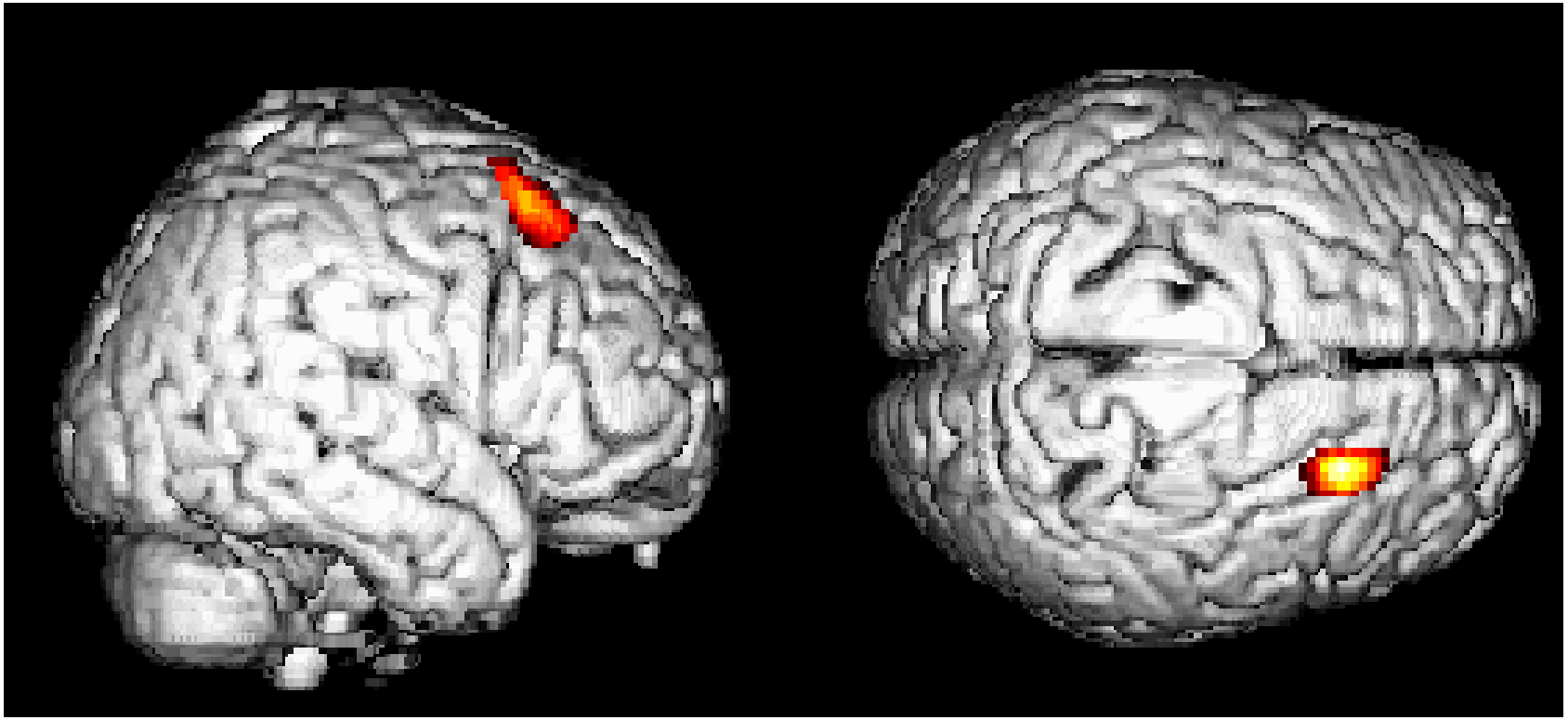
Methods—We used high-resolution perfusion positron emission tomography to study 2 groups of 7 healthy right-handed subjects each: a young group (mean age, 24 years) and an old group (mean age, 60 years). The task was a thumb-to-index tapping, auditory-cued at 1.26 Hz with a metronome, with either the right or the left hand. The control condition was a resting state with the metronome on.

Results—Significant differences between old and young subjects were found, suggesting significant overactivation in older subjects affecting the superior frontal cortex (premotor-prefrontal junction) ipsilateral to the moving fingers, as if the execution of this apparently simple motor task was judged more complex by the aged brain. Similar findings in previous perceptual and cognitive paradigms have been interpreted as a compensation process for the neurobiological changes of aging. Analysis of the control condition data in our sample showed, however, that this prefrontal overactivation in the old group was due at least in part to higher resting perfusion in anterior brain areas in the young subjects.

Conclusions—The changes in brain function observed in this study may underlie the subtle decline in fine motor functions known to occur with normal aging. Our findings emphasize the importance of using an age-matched control group in functional imaging studies of motor recovery after stroke. (*Stroke*. 2001;32:139-146.)

Key Words: aging ■ cerebral blood flow ■ motor activity ■ tomography, emission computed

Old *vs.* Young comparison for Right TI tapping *vs.* Rest
(p< *0.05*, corrected)



Right superior frontal sulcus (BA 6/8)

Calautti, Serrati, Baron; Stroke, 2002

Le parole, in pratica

- La neuroplasticità persiste nell'invecchiamento

- Una rete neuronale operativa più complessa è funzionale al risultato, ma introduce una condizione di fragilità

I luoghi delle cure e la solitudine

Neighborhood Cohesion Is Associated With Reduced Risk of Stroke Mortality

Cari Jo Clark, ScD; Hongfei Guo, PhD; Scott Lunos, MS; Neelum T. Aggarwal, MD; Todd Beck, MS; Denis A. Evans, MD; Carlos Mendes de Leon, PhD; Susan A. Everson-Rose, PhD

Background and Purpose—Greater social cohesion is related to lower rates of coronary heart disease, but its relation to stroke risk is unstudied. This study examined whether neighborhood social cohesion was protective against stroke mortality and incidence.

Methods—Data come from 5789 participants (60% female; 62% black; mean age, 74.7 years) in a longitudinal study of chronic diseases in the elderly. Stroke mortality, ascertained through December 31, 2007, was verified through the National Death Index; 186 stroke deaths were identified in 11 years of follow-up. Stroke incidence was determined in a subset (N=3816) with linkage to Medicare claims files; 701 first-ever strokes were identified. Cohesion was measured by 6 items assessing frequency of contact and social interactions with neighbors; items were z-scored and averaged. Individual scores were averaged across 82 census block groups, forming a neighborhood-level measure of social cohesion. Marginal Cox proportional hazard models tested the association of neighborhood-level cohesion with stroke mortality and incidence.

Results—Each 1-point increase in cohesion related to a 53% reduced risk of stroke mortality (hazard ratio, 0.47; 95% CI, 0.24 to 0.90), adjusting for relevant covariates, including sociodemographics, known stroke risk factors, and neighborhood-level socioeconomic status. A race×cohesion interaction ($P=0.04$) revealed cohesion was protective in whites (hazard ratio, 0.34; 95% CI, 0.17 to 0.67) but not blacks (hazard ratio, 1.17; 95% CI, 0.35 to 3.86). Cohesion was unrelated to stroke incidence ($P>0.5$).

Conclusions—Neighborhood-level social cohesion was independently protective against stroke mortality. Research is needed to further examine observed race differences and pathways by which cohesion is health-protective. (***Stroke.*** **2011;42:1212-1217.)**

Key Words: mortality ■ psychosocial ■ social conditions ■ stroke

Le parole, in pratica

- La coesione sociale è un fattore predittivo di riduzione della mortalità nel post Stroke

- Non perdiamo qualcosa nei trial clinici?

Psychosocial Distress and Stroke Risk in Older Adults

Kimberly M. Henderson, BA; Cari J. Clark, ScD, MPH; Tené T. Lewis, PhD; Neelum T. Aggarwal, MD; Todd Beck, MS; Hongfei Guo, PhD; Scott Lunos, MS; Ann Brearley, PhD; Carlos F. Mendes de Leon, PhD; Denis A. Evans, MD; Susan A. Everson-Rose, PhD, MPH

Background and Purpose—To investigate the association of psychosocial distress with risk of stroke mortality and incident stroke in older adults.

Methods—Data were from the Chicago Health and Aging Project, a longitudinal population-based study conducted in 3 contiguous neighborhoods on the south side of Chicago, IL. Participants were community-dwelling black and non-Hispanic white adults, aged 65 years and older (n=4120 for stroke mortality; n=2649 for incident stroke). Psychosocial distress was an analytically derived composite measure of depressive symptoms, perceived stress, neuroticism, and life dissatisfaction. Cox proportional hazards models examined the association of distress with stroke mortality and incident stroke over 6 years of follow-up.

Results—Stroke deaths (151) and 452 incident strokes were identified. Adjusting for age, race, and sex, the hazard ratio (HR) for each 1-SD increase in distress was 1.47 (95% confidence interval [CI]=1.28–1.70) for stroke mortality and 1.18 (95% CI=1.07–1.30) for incident stroke. Associations were reduced after adjustment for stroke risk factors and remained significant for stroke mortality (HR=1.29; 95% CI=1.10–1.52) but not for incident stroke (HR=1.09; 95% CI=0.98–1.21). Secondary analyses of stroke subtypes showed that distress was strongly related to incident hemorrhagic strokes (HR=1.70; 95% CI=1.28–2.25) but not ischemic strokes (HR=1.02; 95% CI=0.91–1.15) in fully adjusted models.

Conclusions—Increasing levels of psychosocial distress are related to excess risk of both fatal and nonfatal stroke in older black and white adults. Additional research is needed to examine pathways linking psychosocial distress to cerebrovascular disease risk. (***Stroke*. 2013;44:367-372.**)

Key Words: epidemiology ■ psychosocial stress ■ risk factors ■ women and minorities

Le parole, in pratica

- Nei soggetti più anziani il "distress psicosociale aumenta il rischio di Ictus"
- Non perdiamo qualcosa nei programmi di prevenzione?
- Quale via fisiopatologica unisce il distress all'Ictus?

Marriage and risk of dementia: systematic review and meta-analysis of observational studies

OPEN ACCESS

RESEARCH PAPER

Marriage and risk of dementia: systematic review and meta-analysis of observational studies

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► Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/jnnp-2017-316274).

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ABSTRACT

Background Being married is associated with healthier lifestyle behaviours and lower mortality and may reduce risk for dementia due to life-course factors. We conducted a systematic review and meta-analysis of studies of the association between marital status and the risk of developing dementia.

Methods We searched medical databases and contacted experts in the field for relevant studies reporting the relationship, adjusted for age and sex, between marital status and dementia. We rated methodological quality and conducted random-effects meta-analyses to summarise relative risks of being widowed, divorced or lifelong single, compared with being married. Secondary stratified analyses with meta-regression examined the impact of clinical and social context and study methodology on findings.

Results We included 15 studies with 812 047 participants. Compared with those who are married, lifelong single (relative risk=1.42 (95% CI 1.07 to 1.90)) and widowed (1.20 (1.02 to 1.41)) people have elevated risk of dementia. We did not find an association in divorced people. Further analyses showed that less education partially confounds the risk in widowhood and worse physical health the elevated risk in lifelong single people. Compared with studies that used clinical registers for ascertaining dementia diagnoses, those which clinically examined all participants found higher risk for being unmarried.

Conclusions Being married is associated with reduced risk of dementia than widowed and lifelong single people, who are also underdiagnosed in routine clinical practice. Dementia prevention in unmarried people should focus on education and physical health and should consider the possible effect of social engagement as a modifiable risk factor.

neuropathological damage by using compensatory cognitive approaches from a physically more resilient brain to maintain cognitive ability and daily function.[5] Marriage may result in more frequent social contact, which is associated with reduced dementia risk,[6] and reduced harmful lifestyle behaviours.[7 8] Bereavement or divorce in people who had been married may promote dementia development through stress, which is pathogenic[9] and associated with increased dementia risk.[10] Being unmarried is associated with adverse health behaviours[7] and a range of poorer health outcomes. A meta-analysis of observational studies found lower mortality for married than unmarried people[11]; health of unmarried Americans is worse than that of married people[8]; being married is related to improved cancer survival[12]; and widowhood is associated with disability in older people.[13]

In this study, we aim to synthesise evidence from published studies examining the effect of marital status (married/cohabiting, widowed, divorced/separated and lifelong single) on dementia incidence and the extent to which this risk is modified by sociodemographic factors, study design and methodological quality of the study. We hypothesise that married people are at lower risk of developing dementia compared with unmarried people and that previously married people are at lower risk than those who have been lifelong single.

Le parole, in pratica

- Dati forti indicano che l'essere sposati è un fattore protettivo per demenze rispetto alle persone "single".

- I programmi di prevenzione ne devono tenere conto (informazione, controllo della salute, impegno sociale)

Delirium

Delirium in the acute phase after stroke: comparison between methods of detection

Maria Teresa Infante[1] · Matteo Pardini[2] · Maurizio Balestrino[2] · Cinzia Finocchi[2] · Laura Malfatto[1] · Giuseppe Bellelli[3] · Giovanni Luigi Mancardi[2] · Carlo Gandolfo[2] · Carlo Serrati[1]

Received: 21 October 2016 / Accepted: 24 January 2017

Abstract Delirium is an acute neuropsychiatric syndrome, very common in hospitalized people with medical and neurological conditions. The identification of delirium after stroke is not an easy task and validated psychometric instruments are needed to correctly identify it. We decided to verify if (1) formal training in DSM-V criteria is needed to correctly identify post-stroke delirium, (2) if the use of a brief psychometric instrument such as 4AT improves its identification, (3) the applicability of these scales in the stroke setting. In the first phase of this study we retrospectively studied 102 acute stroke patients in Stroke Units of San Martino Hospital (Genova, Italy) to evaluate delirium with clinical criteria, first by a neurologist without a formal training in DSM-V criteria and after training. Then, we enrolled 100 new acute stroke patients who underwent screening for delirium using 4AT scale and DSM-V criteria. In the first phase, DSM-V criteria training significantly increased the ability to capture delirium (5 vs. 15%). In the second phase, the 4AT was used for delirium screening revealing a 52% of cases of delirium, the same observed by the consensus diagnosis of two senior neurologists (that was 50%). In the second phase, the use of 4AT scale allowed to capture post-stroke delirium as well as the consensus diagnosis by two neurologists. The identification of post-stroke delirium is not an easy task and requires both formal training in DSM-V criteria as well as the application of brief scales, such as the 4AT.

Le parole, in pratica

- In una delle poche Stroke Unit italiane pienamente rispondenti al DM 70, l'incidenza di Delirium misurata con 4 AT supera il 50%

- Non manca forse il 5° parametro vitale?

Le parole nella Psicogeriatria

•Le competenze emotive: il riconoscimento emozionale

•Capacità di riconoscere le emozioni proprie ed altrui (mentalizzazione, teoria della mente)

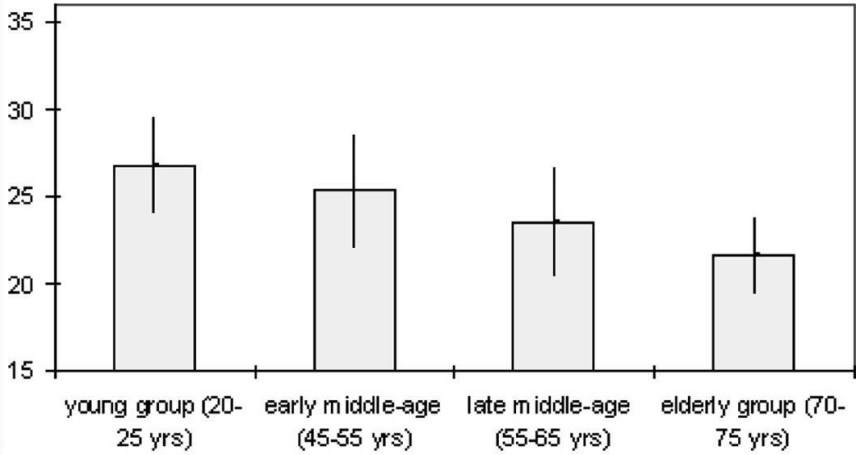
•Alterata in diverse condizioni neuropsichiatriche:

- autismo infantile
- schizofrenia
- demenza fronto-temporale

•Quantificabile mediante test standardizzati

•Variabile da individuo a individuo, inizia a declinare dopo i 45 anni (Pardini & Nichelli, 2009)

(Baron-Cohen et al., 2001)

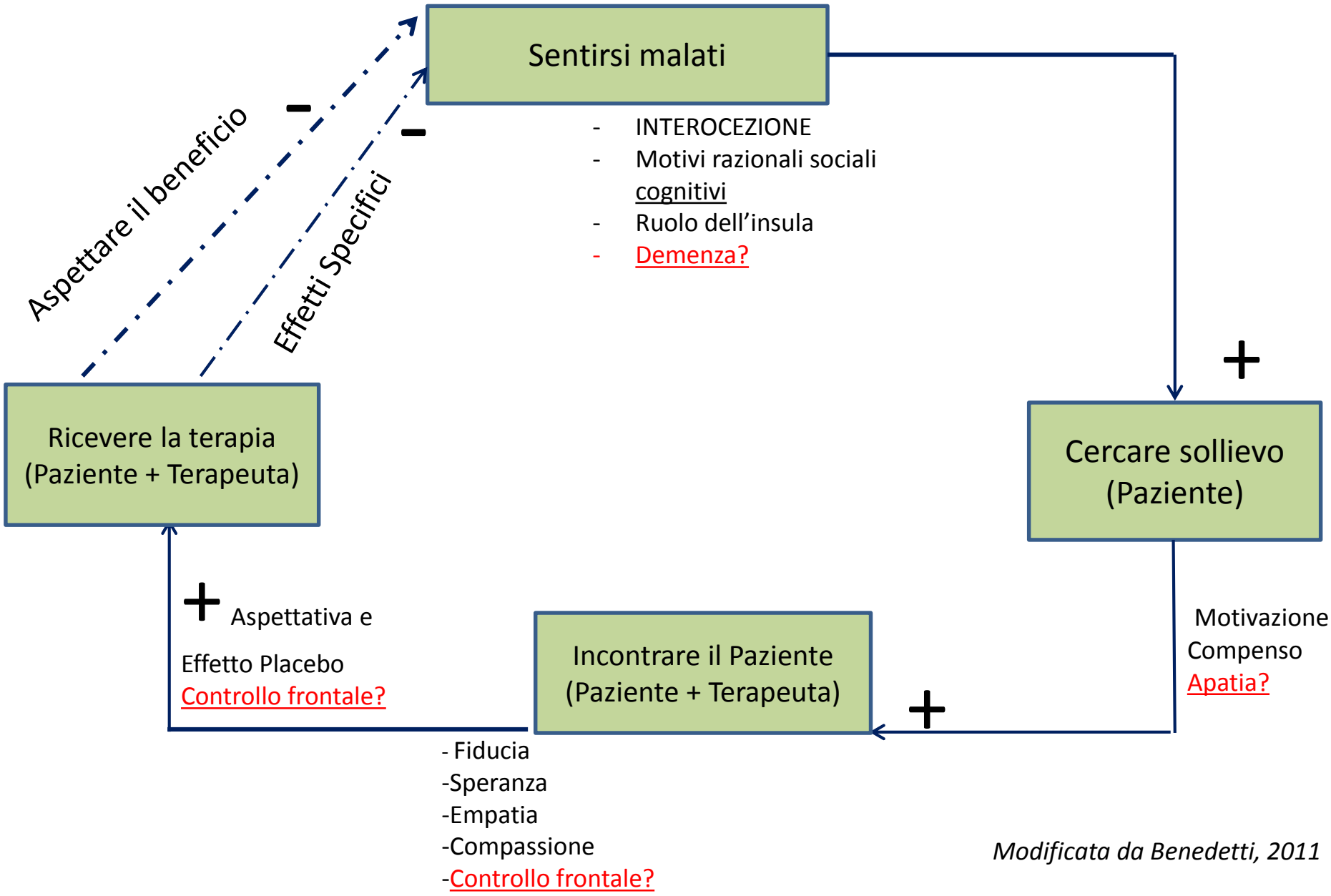


(Pardini & Nichelli, 2009)

Inner Speech (Linguaggio Intend)

- Esperienza soggettiva del linguaggio in assenza di articolazione udibile
- Fondamentale nella regolazione comportamentale dei bambini
- E' probabilmente implicato in molti processi cognitivi, con funzione di diffuso supporto (self regolation).
- Allucinazioni verbali uditive
- Disturbi depressivi ("ruminazione")
- Disturbi d'ansia generalizzata (e panico)
- E' estremamente difficile da studiare per ovvie ragioni metodologiche.

E in Neuro Psicogeriatria?



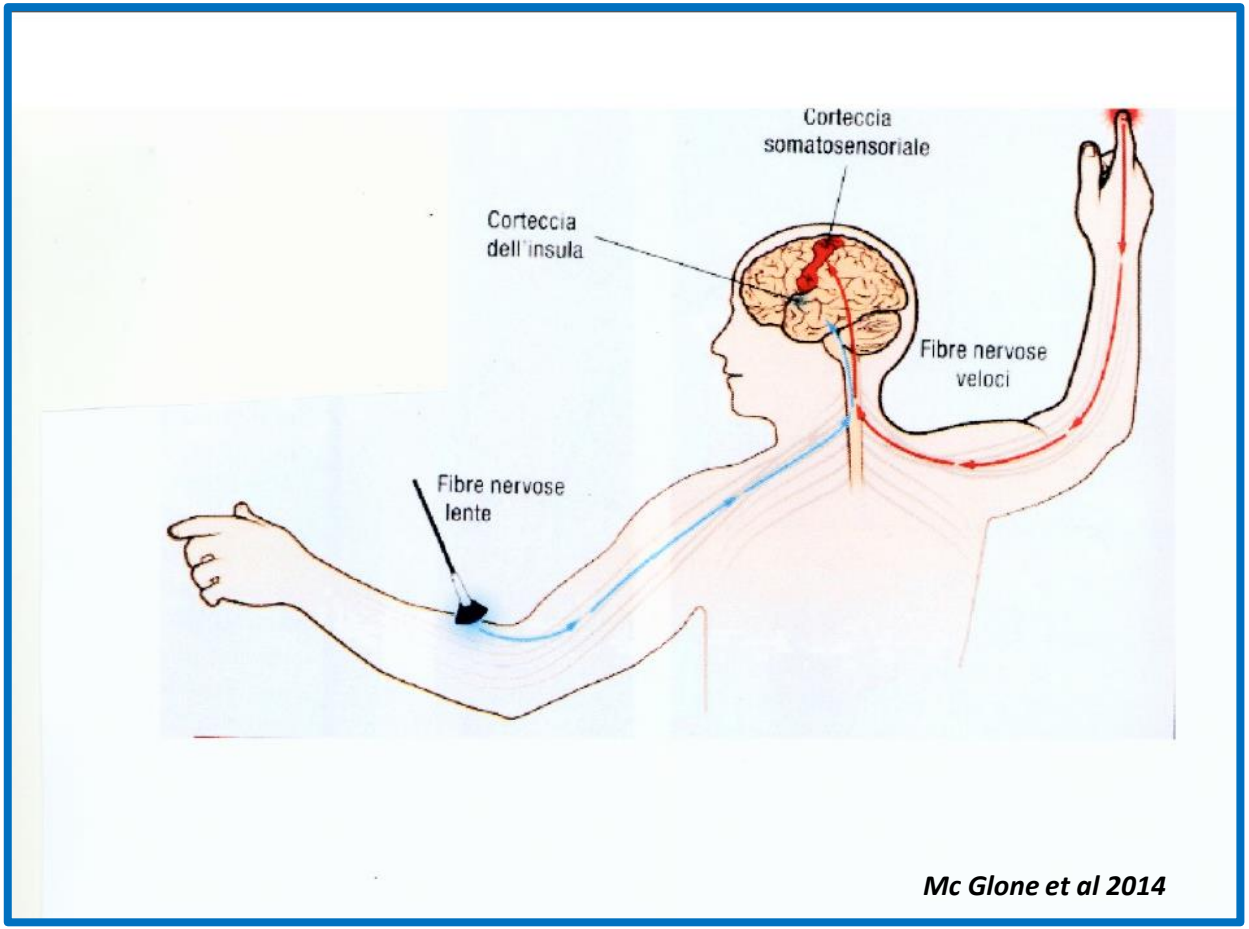
Modificata da Benedetti, 2011

Le parole, in pratica

- Spesso non è semplice "trovarle " in Neuro Psicogeriatria

- Quando non si può o non si riesce a dire nulla, non dire nulla

  PERO'……



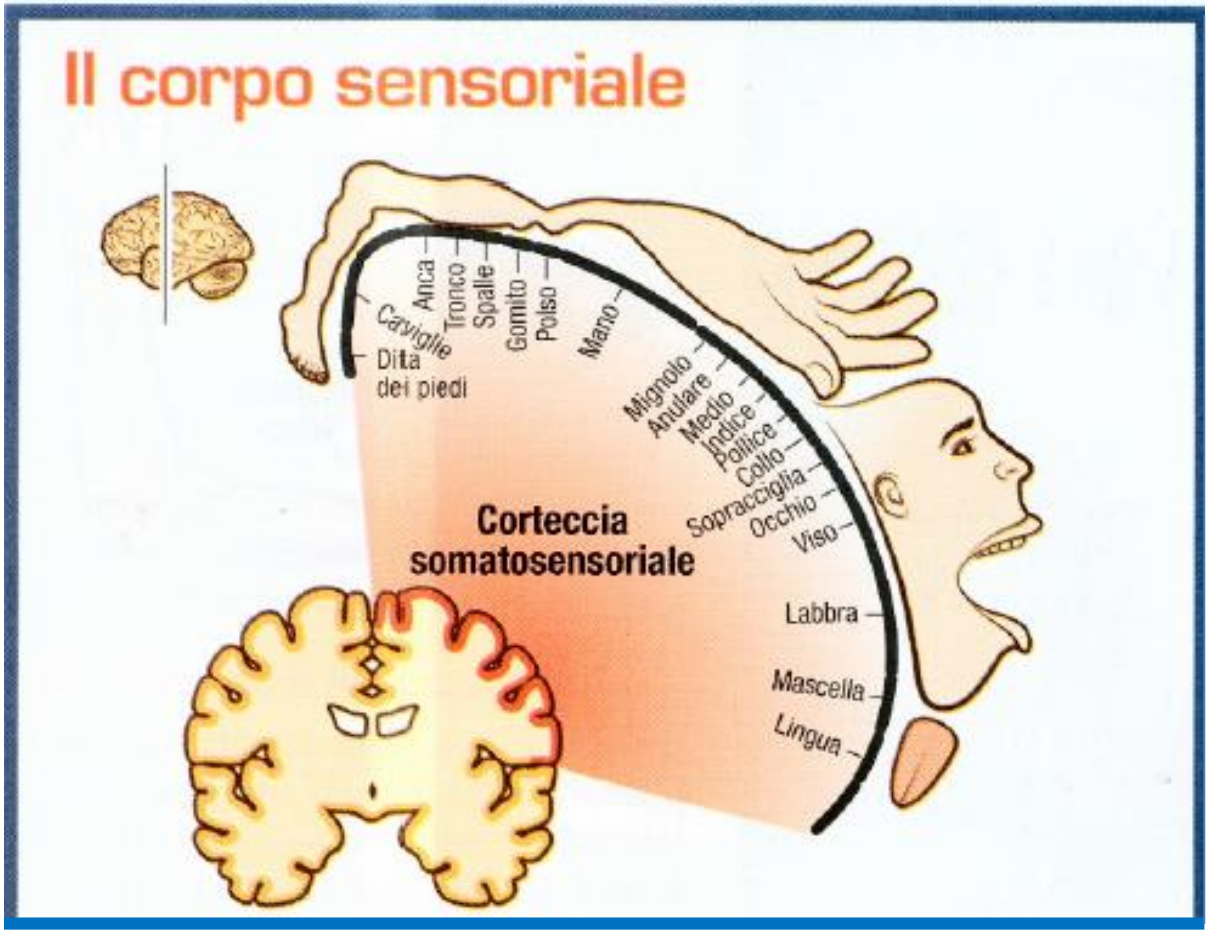
Mc Glone et al 2014

risposta veloce

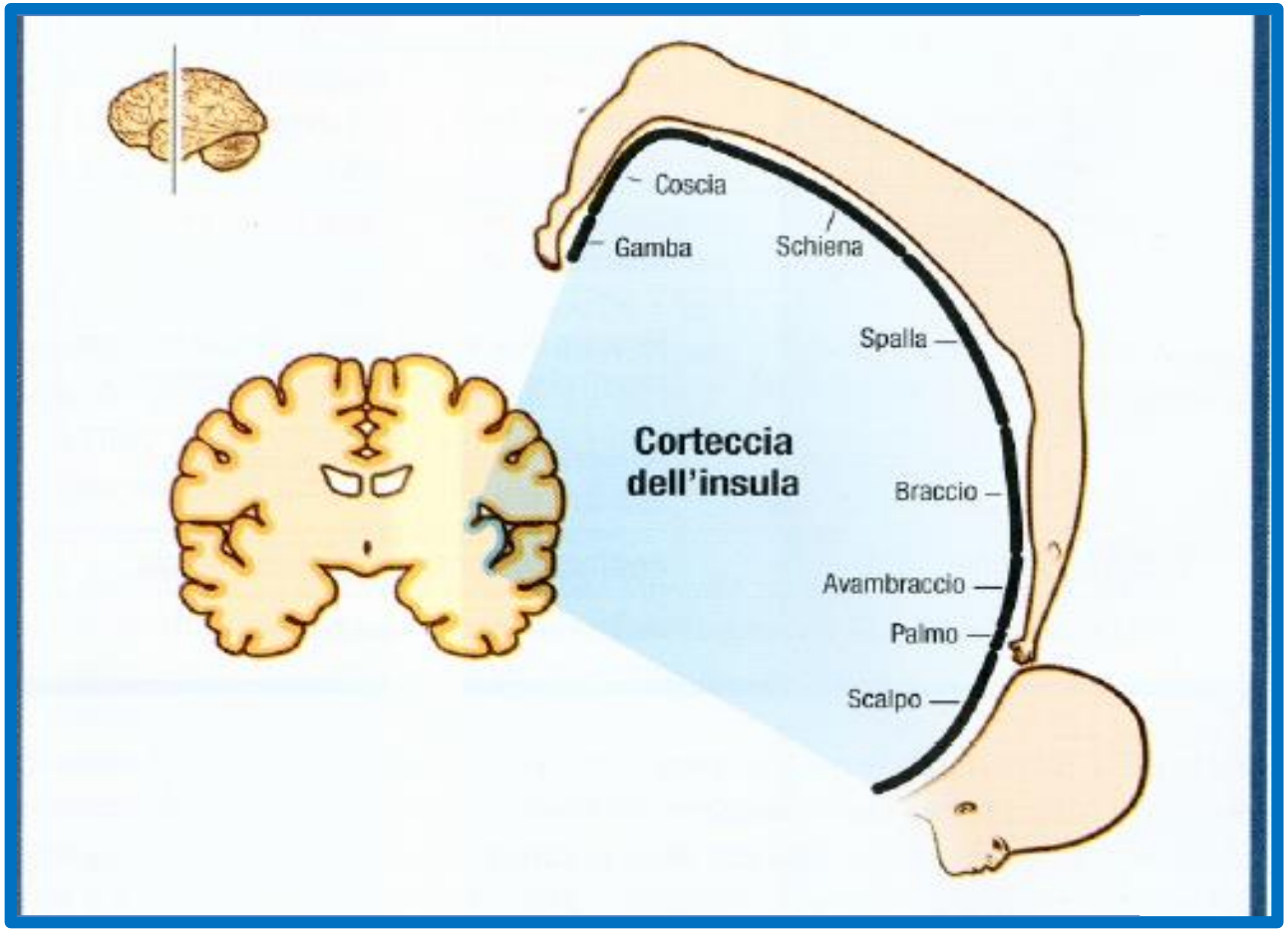
Risposta lenta

Tipo di fibra	Informazione trasportata dalla fibra	Esempio di fibra specifica
A- beta Cinque sottotipi convolti nel tatto	Vibrazione	Notare un tavolo che traballa sotto i gomiti
	Movimento	Percepire una scodella una che scivola dalle mani
	Rientranza	Sentire il peso di un gatto raggomitolato in grembo
	Stiramento	Rendersi conto che le gambe nude sono rimaste appiccicate alla sedia in una giornata umida
	Movimento dei peli più lunghi	Sentire il vento che sposta i capello in varie direzione
A-delta (un sottotipo coinvolto nel tatto)	Movimento dei peli più corti (spiacevole)	Reagire alla sensazione strisciante di un ragno che sta risalendo l'avambraccio
C (un sottotipo coinvolto nel tatto)	Movimento dei peli più corti (piacevole)	Reagire a un piacevole massaggio alla schiena
	Temperatura	Apprezzare il calore di un abbraccio

Mc Glone et al, 2014

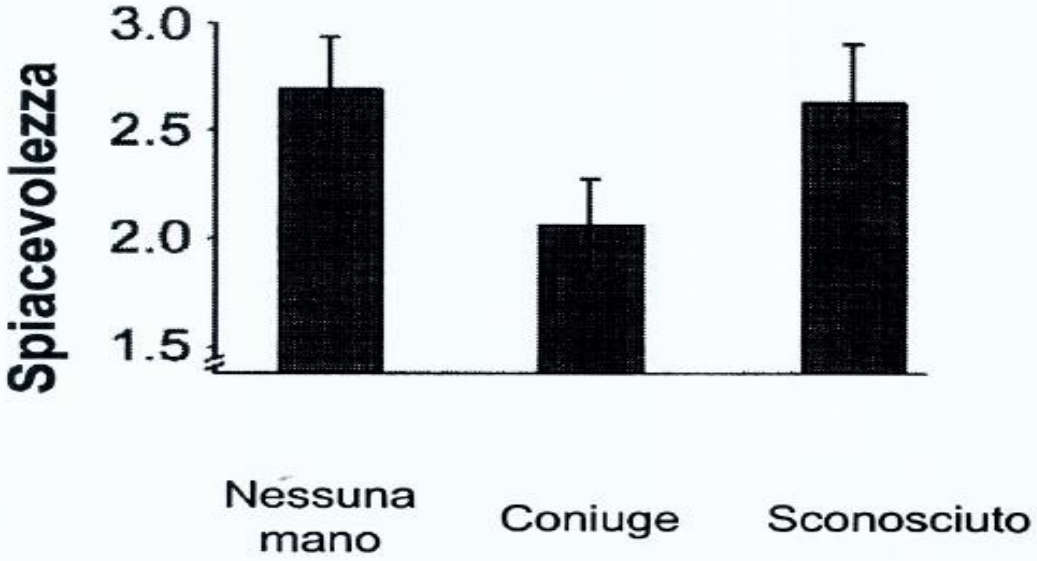


Mc Glone et al 2014



Mc Glone et al, 2014

A



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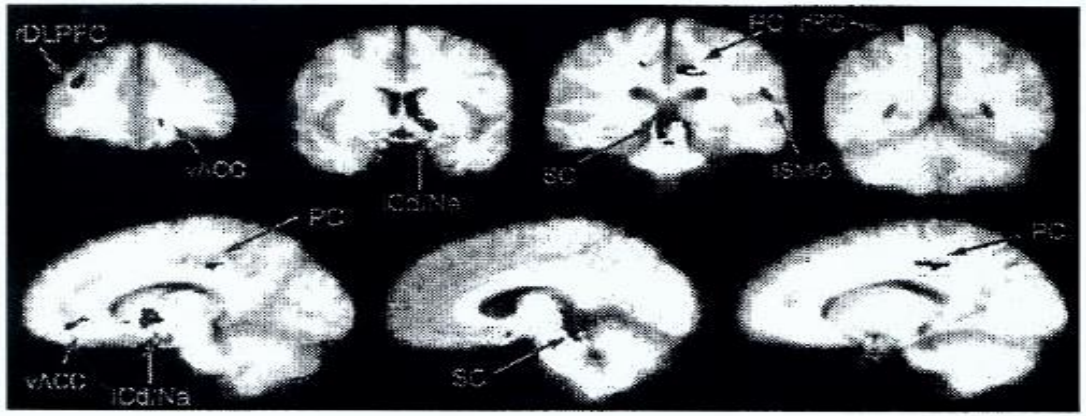

Coan et al, 2006

Conclusioni (1)

- Le parole strutturano il nostro operare e guidano il passaggio dalle acquisizioni scientifiche alle decisioni cliniche.

  Ciò in ambito Neuro psicogeriatrico è particolarmente

  rilevante

- Una riflessione "tecnica " sul significato delle parole è a mio avviso indispensabile. Quando dico che un paziente anziano "è depresso", che cosa intendo veramente? Che cosa capirà il paziente, la famiglia, un collega.

- La comunicazione è certamente sempre fatta di parole, ma anche di toni, di sguardi, di tocchi: in Neuro psicogeriatria ciò è particolarmente vero.

Conclusioni (2)

Parlare in modo complicato, utilizzare parole difficili sta a segnalare che si fa parte dei privilegiati, si viene invitati ai convegni, coperti di onori.

Ma bisogna chiedersi se tutti quei discorsi hanno un contenuto, se non si riesce a dire la stessa cosa con parole semplici.

E' quasi sempre possibile

NoamChomsky