SINPIA
Società Italiana di Neuropsichiatria dell'Infanzia e dell'Adolescenza

I MERCOLEDÌ DELLA SINPIA
Webinar di Approfondimento

Mercoledì 8 Ottobre 2025
ore 17:00/19:00

Il ruolo del trattamento riabilitativo integrato nei disordini neuromotori funzionali

Sezione di Neuroriabilitazione dell'Età Evolutiva

I Disturbi Motori Funzionali: dai CRITERI DIAGNOSTICI alla FORMULAZIONE CLINICA PERSONALIZZATA

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Sistema Socio Sanitario
Regione Lombardia

I Disturbi Motori Funzionali:
dai CRITERI DIAGNOSTICI alla FORMULAZIONE CLINICA PERSONALIZZATA

1. Fenotipi Clinici

Segni clinici positivi

Esami diagnostici

Criteri diagnostici

2. Comunicazione della diagnosi

Accettazione

Lotta allo stigma

3. Formulazione clinica personalizzata

Fattori bio-psico-sociali (3P)

Inquadramento neuropsicologico

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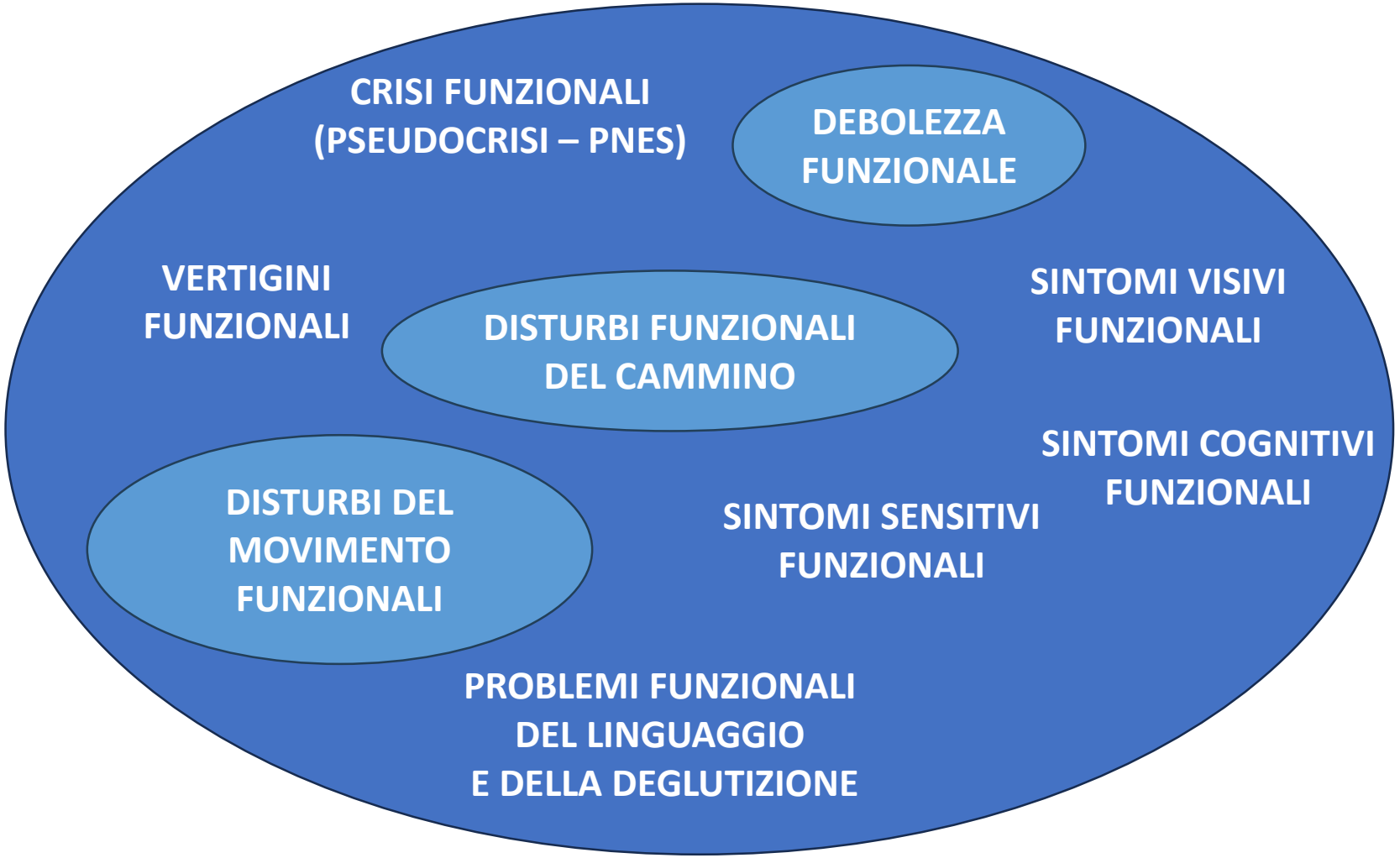
1. I DISTURBI MOTORI FUNZIONALI (FMD) – FENOTIPI CLINICI

DISTURBI NEUROLOGICI FUNZIONALI



DSM-5

DIAGNOSI CLINICA POSITIVA (NON DI ESCLUSIONE)

NON NECESSARIO FATTORE PSICOLOGICO STRESSANTE

COME ARRIVARE ALLA DIAGNOSI?

SEGNI CLINICI POSITIVI

ESAMI STRUMENTALI

CRITERI DIAGNOSTICI

DISTURBI DEL MOVIMENTO FUNZIONALI

CARATTERISTICHE CLINICHE POSITIVE

Functional motor symptom	Clinical features	Laboratory tests
Tremor	Entrainment (tremor takes on the rhythm of paced movements performed with another body part) Pause with quick movement of another limb Variability in frequency, amplitude Tonic contraction at onset Increase in amplitude with weighting Coherence of tremor between two limbs Whack-a-mole sign (restraint of tremor induces tremor in another body part)	Clinical neurophysiological measurements can quantify entrainment, pause with quick movement, variability, tonic contraction at onset, increase amplitude with weighting and coherence between limbs
Myoclonus	Variability and long duration of the movement Complex movement Appearance of startle Long and variable latency of stimulus induced jerks Jerks when tendon hammer stops short of contact	Long electromyography bursts Presence of a Bereitschaftspotential (readiness potential) before the jerk With stimulus-induced jerks: long and variable latency
Tic	Lack of urge Lack of voluntary control (suppressibility)	Normal Bereitschaftspotential
Dystonia	Certain patterns such as fixed dystonia or pulling lip to one side	Normal blink reflex recovery Normal plasticity with paired associative conditioning
Parkinsonism	Marked slowness or incoordination in examination but not with normal movements Gegenhalten (variable resistance during passive movement) Lack of sequence effect (slowness without amplitude decrement during repetitive movements) Huffing and puffing sign (fatigue with minimal effort)	Normal dopamine transporter scan

Perez et al, Journal of Neurology, Neurosurgery & Psychiatry 2021

DISTURBI DEL MOVIMENTO FUNZIONALI

		ESAMI STRUMENTALI
Functional motor symptom	**Clinical features**	**Laboratory tests**
Tremor	Entrainment (tremor takes on the rhythm of paced movements performed with another body part) Pause with quick movement of another limb Variability in frequency, amplitude Tonic contraction at onset Increase in amplitude with weighting Coherence of tremor between two limbs Whack-a-mole sign (restraint of tremor induces tremor in another body part)	Clinical neurophysiological measurements can quantify entrainment, pause with quick movement, variability, tonic contraction at onset, increase amplitude with weighting and coherence between limbs
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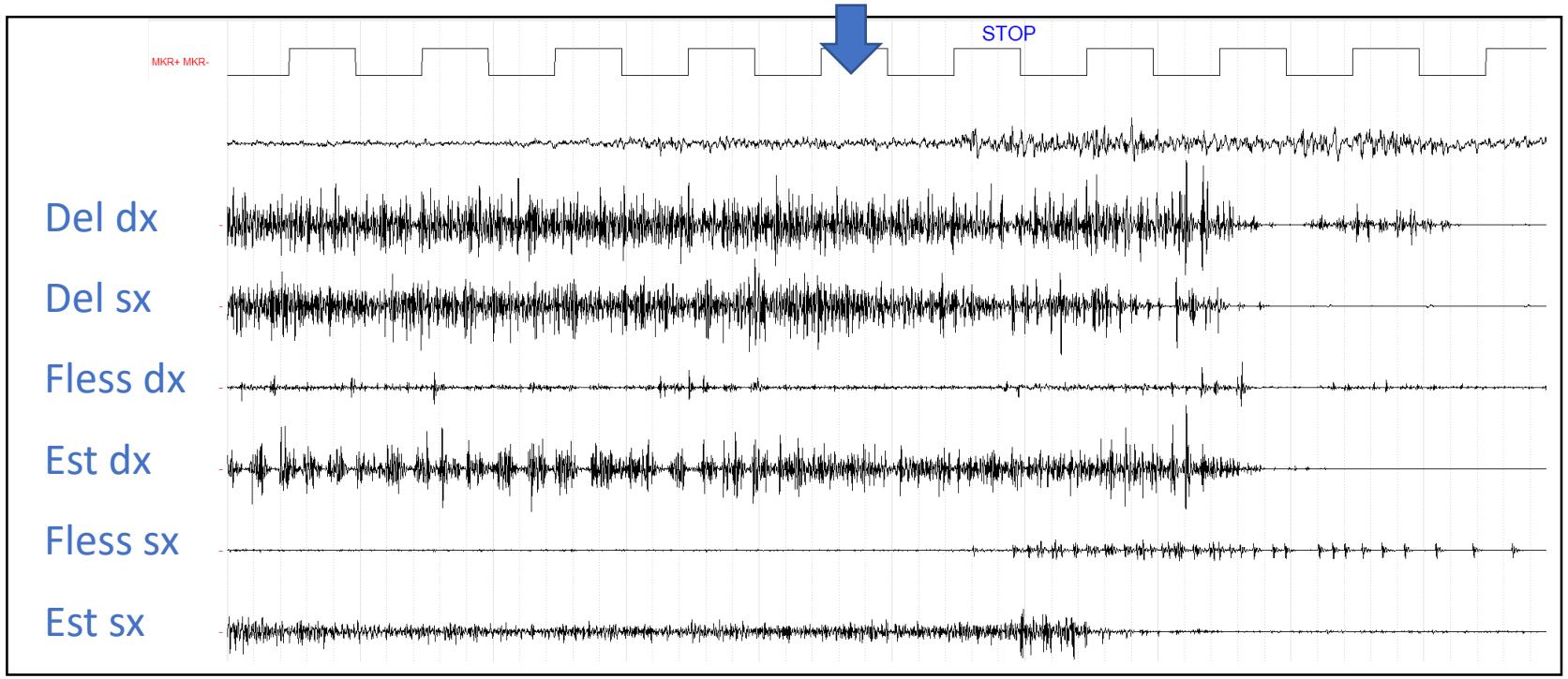
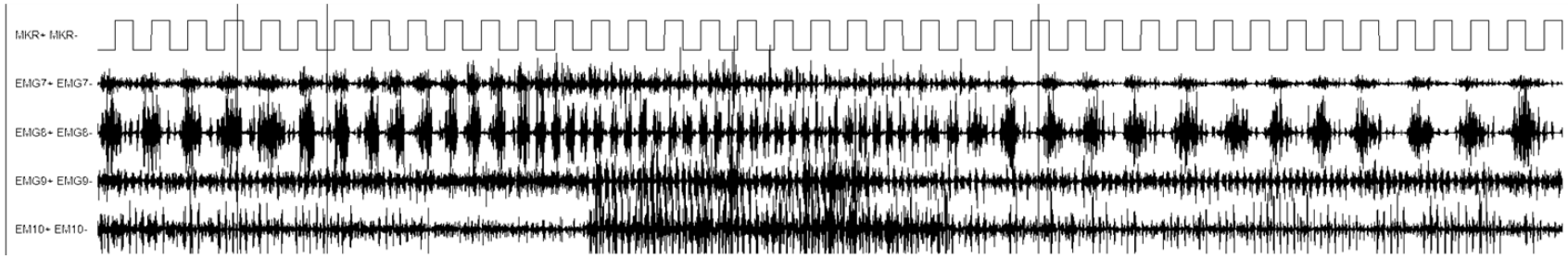
Perez et al, Journal of Neurology, Neurosurgery & Psychiatry 2021

FMD – CARATTERIZZAZIONE CLINICA E NEUROFISIOLOGICA

Tremore



Interruzione tremore prima della decontrazione muscolare

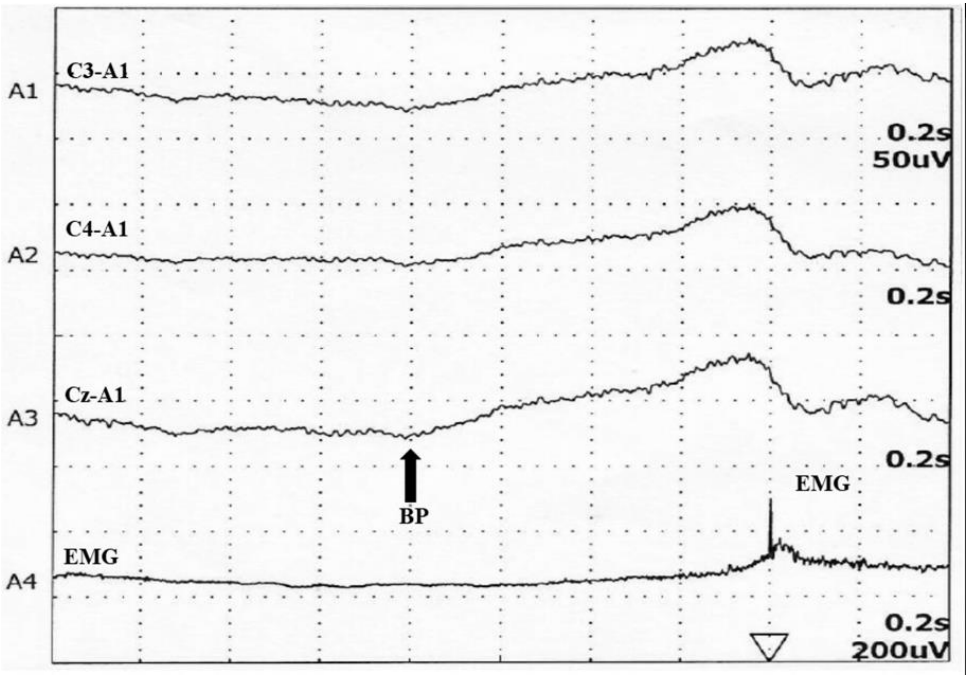


Trascinamento

FMD – CARATTERIZZAZIONE CLINICA E NEUROFISIOLOGICA

Mioclono

Bereitschaftspotential (BP)



Mioclono funzionale: BP circa 800 msec prima dell'attività EMG
Rakesh et al, 2020

DEBOLEZZA FUNZIONALE

Handbook of Clinical Neurology, Vol. 139 (3rd series)
Functional Neurologic Disorders
M. Hallett, J. Stone, and A. Carson, Editors
http://dx.doi.org/10.1016/B978-0-12-801772-2.00017-5
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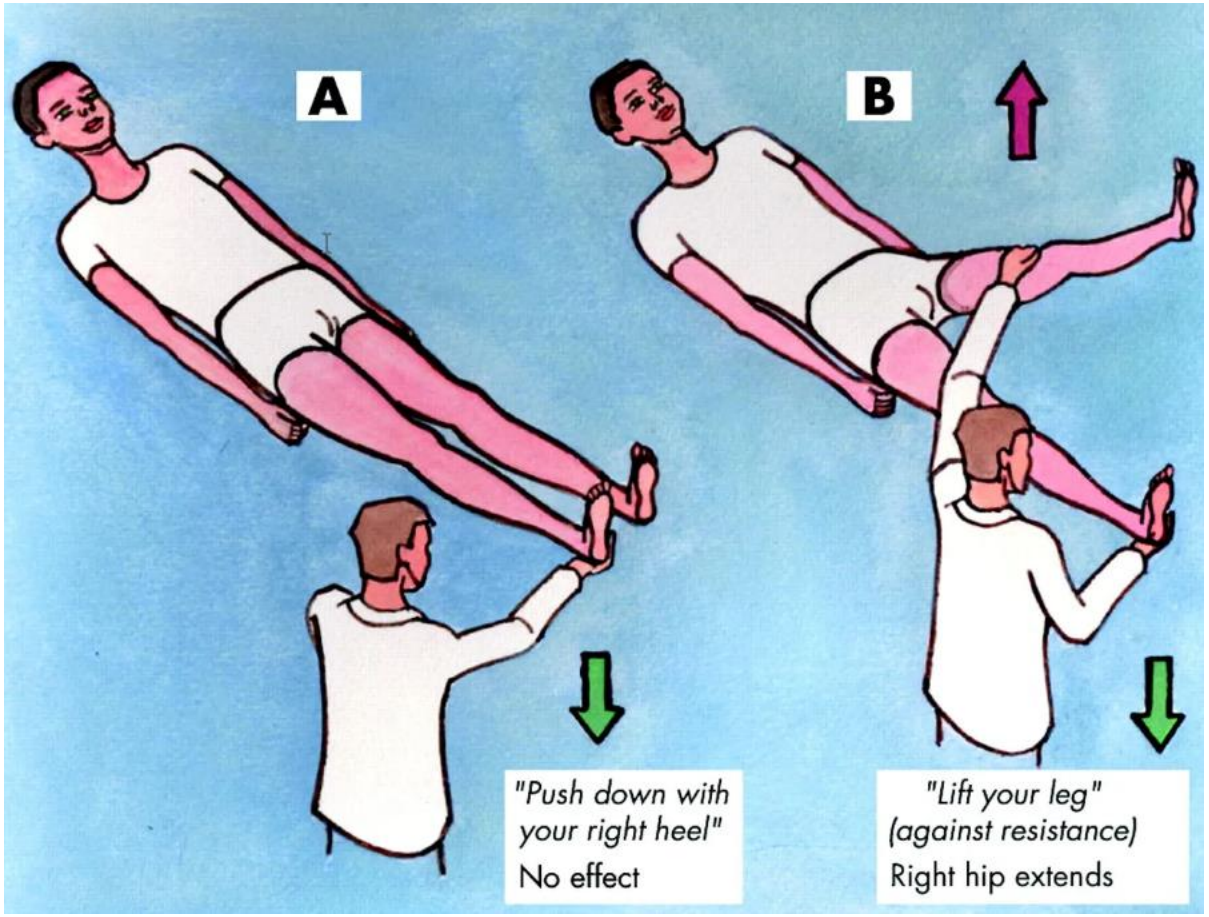
SEGNI CLINICI POSITIVI

Hoover's sign



Chapter 17

Neurologic diagnostic criteria for functional neurologic disorders

C. GASCA-SALAS[1,2] AND A.E. LANG[1]*

Sign	Description/assumption	Sensitivity	Specificity
Hoover's sign	Weakness of hip extension that resolves during contralateral hip flexion against resistance	63–100%	86–100%
Abductor sign	Weakness of hip abduction that resolves with contralateral hip abduction against resistance	100%	100%
Spinal injury center test	In patients unable to lift up their knees, legs are passively lifted up in a flexed posture. The paretic leg will not fall in nonorganic weakness	100%	13–98%
Abduction finger test	In healthy subjects, abduction finger movements of one hand against resistance for 2 minutes will display a synkinetic abduction of the fifth finger of the contralateral (nonorganic paretic) hand	100%	100%
Drift without pronation	Arms stretched out and palms in supinated position. Downward drift without pronation was described as a sign of functional paresis	61–100%	93–95%
Collapsing weakness	In nonorganic weakness a limb collapses from a normal position with a light touch	44–70%	98–100%
Give-way weakness	In functional paresis strength initially is normal during testing and then suddenly collapses	20–85%	95–100%

DISTURBI DEL CAMMINO

Suggested positive signs for functional gait disorders and general sign

Sign	Description/assumption	Sensitivity	Specificity	Inter-rater agreement (κ Cohen's)* (Daum et al., 2015)	Reliability (Daum et al., 2015)	Comments (see Table 17.1 for generic methodologic issues)	References
Dragging monoplegic leg	In functional gait the leg is dragged after the patient "as it was inanimate matter" without circumduction seen in pyramidal weakness and typically with the forefoot in contact with the ground at all times (Todd, 1856)	8–11%	100%	Moderate (0.44)	Reliable	–	Ehrbar and Waespe, 1992; Stone et al., 2010; Daum et al., 2015
Chair test	Based on Blocq's (Blocq, 1888) description. Patients with nonorganic astasia-abasia despite apparently normal power can propel a swivel chair while sitting	89%	100%	–	–	No inter-rater reliability study	Okun et al., 2007
Falls always towards support	The patient falls in the direction of the examiner or another support	19%	93%	Excellent (0.83)	Suggestive	–	Daum et al., 2015
Psychogenic Romberg	Constant falls towards or away from the observer, large-amplitude body sway after a latency of a few seconds and improvement with distraction	39%	100%	Moderate (0.54)	Reliable	In the study of Lempert et al. (1991), this sign was present in 12 out of 25 patients and none of 13 healthy drama students simulators	Lempert et al., 1991; Daum et al., 2015
Noneconomic posture	A walking pattern that requires waste of muscle energy in order to maintain balance (for instance, standing and walking with flexion of hips and knees)	21%	100%	Moderate (0.53)	Suggestive	–	Lempert et al., 1991; Okun et al., 2007; Daum et al., 2015
Sudden knee buckling	Sudden knee buckling, usually with no falls	21%	95%	Moderate (0.52)	Suggestive	Infrequent sign. It can be found in chorea (Daum et al., 2015)	Keane, 1989; Lempert et al., 1991; Baik and Lang, 2007; Okun et al., 2007; Daum et al., 2015
Hesitation	The beginning of the movement is delayed or not possible	37%	100%	Good (0.66)	Reliable	Organic freezing of gait or start hesitation could be confused with this	Lempert et al., 1991; Daum et al., 2015
Tremulousness	Body tremor with up-and-down shaking of the body (flexion/extension of the knees), not compatible with an orthostatic tremor	16%	100%	Good (0.64)	Suggestive	–	Lempert et al., 1991; Daum et al., 2015
Bizarre excursion of the trunk	Bizarre excursions of the trunk, often building up over a few seconds; legs often unaffected	21%	100%	Moderate (0.48)	Reliable	–	Lempert et al., 1991; Daum et al., 2015
Excessive slowness	The slow motion is not consistent with an organic neurologic disorder	94%	32%	Moderate (0.47)		Common in functional gait disorders. moderate inter-rater agreement and high specificity (Daum et al., 2015)	Lempert et al., 1991; Baik and Lang, 2007; Okun et al., 2007; Daum et al., 2015
Expressive behavior (general sign)	Suffering or strained facial expression, moaning, mannered posture of hands, hyperventilation or grasping of the leg	55%	95%	Good (0.62)	Reliable	–	Lempert et al., 1991; Daum et al., 2015

*Inter-rater agreement: poor (<0.20), fair (0.21–0.40), moderate (0.41–0.60), good (0.61–0.80), excellent (0.81–1).

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SEGNI CLINICI POSITIVI

Chapter 17

Neurologic diagnostic criteria for functional neurologic disorders

C. GASCA-SALAS[1,2] AND A.E. LANG[1]*

Schemi specifici:

cedimento del ginocchio
trascinamento di una gamba monoplegica
astasia-abasia
estrema lentezza
zoppia atipica

Equilibrio migliore di quanto dichiarato

Nessuna caduta, cadute controllate o verso un appoggio

Distrazione!

CRITERI DIAGNOSTICI

1988 Fahn-Williams Criteria		1995 Fahn-Williams Criteria	
A **Documented**	Persistent relief by psychotherapy, suggestion or placebo, or observed without the movement disorder when unobserved	**DEFINITE** **A. Documented** Persistent relief by psychotherapy, suggestion or placebo, physiotherapy*, or observed without the movement disorder when unobserved	
A **Clinically Established**	Inconsistent over time/incongruent with a classical movement disorder PLUS any of the following: + other false neurological signs + multiple somatizations + obvious psychiatric disturbance + distractibility± + deliberate slowness±	**B. Clinically Established** Inconsistent over time/incongruent with a classical movement disorder **PLUS** any of the following: + other false neurological signs + multiple somatizations + obvious psychiatric disturbance	
A **Clinically Probable**	Inconsistent over time OR incongruent with classical movement disorder OR congruent/consistent + other false neurological signs +multiple somatizations +obvious psychiatric disturbance +distractibility† + deliberate slowness†	**C. Clinically Probable**†	Inconsistent over time OR incongruent with classical movement disorder OR congruent/consistent + Other false neurological signs + multiple somatizations
A **Clinically Possible**	Evidence of an emotional disturbance	**D. Clinically Possible**†	Evidence of an emotional disturbance

2009 Gupta and Lang Proposed Criteria

Clinically Definite:

A. Documented

Persistent relief by psychotherapy, suggestion or placebo, physiotherapy*, or observed without the movement disorder when unobserved

B1. Clinically Established (+) Other Features

Inconsistent over time/incongruent with a classical movement disorder PLUS any of the following:

+ other false neurological signs
+ multiple somatizations
+ obvious psychiatric disturbance

B2. Clinically Established (–) Other Features*

Inconsistent over time/incongruent with a classical movement disorder MINUS any other features

C. Laboratory-Supported Definite

Electrophysiological evidence proving a psychogenic movement disorder (primarily in cases of psychogenic tremor and psychogenic myoclonus)

DOCUMENTATO

CLINICAMENTE DEFINITO +/-

DEFINITO SUPPORTATO STRUMENTALMENTE

2. LA COMUNICAZIONE DELLA DIAGNOSI

«La sofferenza è reale, ma sentono che nessuno ci crede»
Susan O'Sullivan

COMUNICAZIONE EFFICACE → **ACCETTAZIONE DIAGNOSI**

1) NOME alla diagnosi: **dg POSITIVA**, NON di esclusione – uso della **TERMINOLOGIA CORRETTA**
2) Legittimare le preoccupazioni (il **sintomo è REALE**)
3) Non far sentire isolati (è **FREQUENTE**)
4) Spiegare il meccanismo: **concetto fondamentale DISSINERGIA MENTE-CORPO (**software/hardware)
5) Mostrare i **segni positivi** o gli esami diagnostici
6) Rassicurare sulla **possibilità di cura** (ma percorso a volte lungo)
7) Fare un **PIANO D'AZIONE**

DA EVITARE: conclusioni affrettate sull'eziologia psicologica

LA LOTTA ALLO STIGMA

DISABILITY AND REHABILITATION
2024, VOL. 46, NO. 1, 1–12
https://doi.org/10.1080/09638288.2022.2155714

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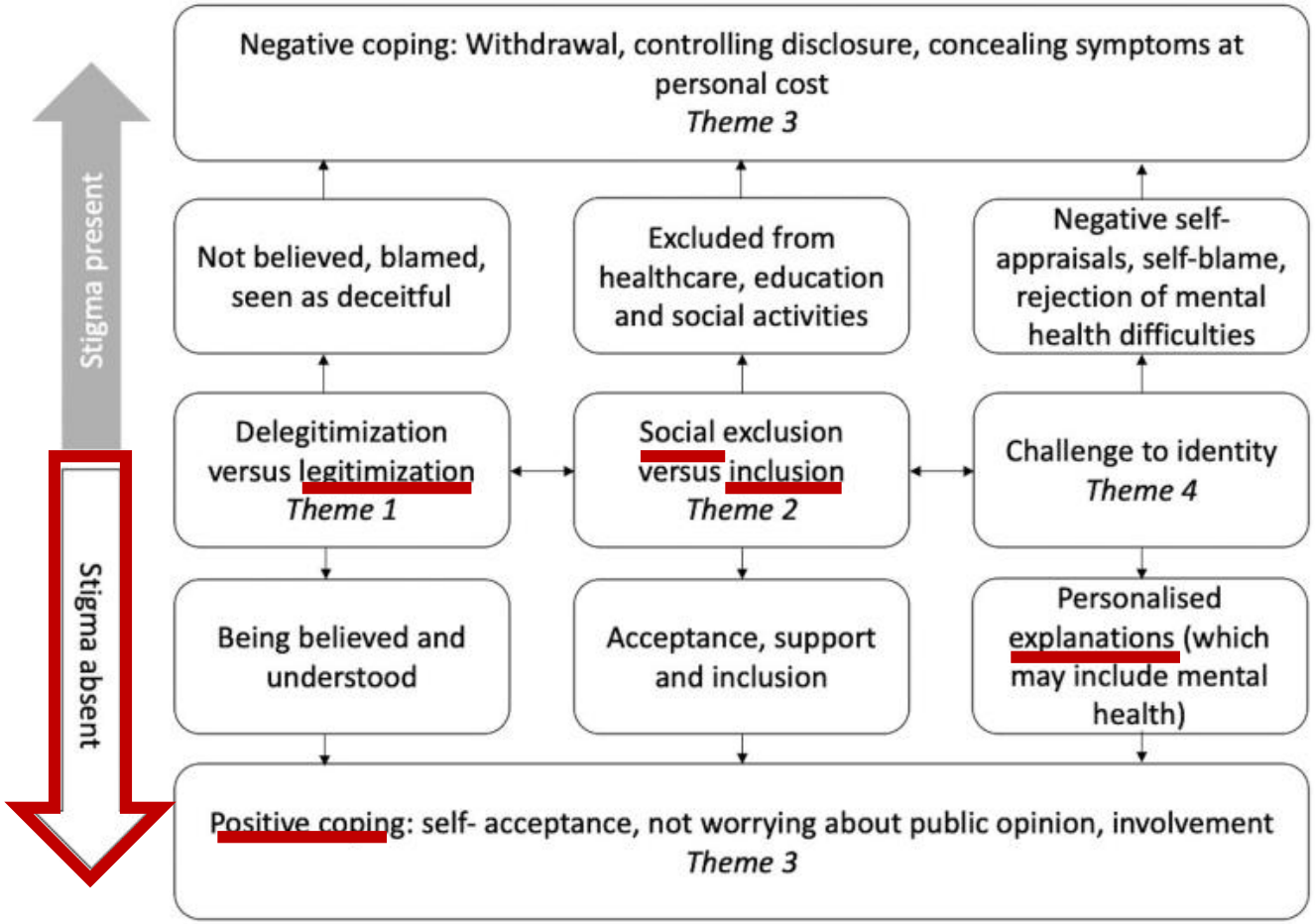
REVIEW

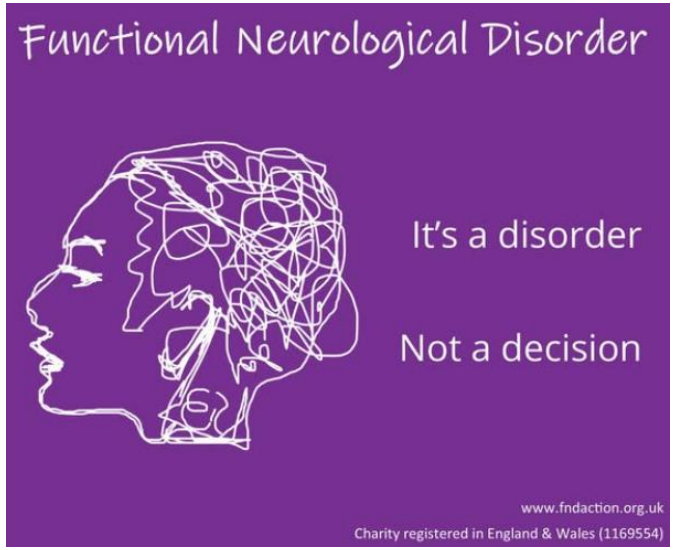
OPEN ACCESS Check for updates

A meta-ethnographic synthesis of the experiences of stigma amongst people with functional neurological disorder

Ciarán Foley[a]*, Antonia Kirkby[b] and Fiona J. R. Eccles[a]

[a]Division of Health Research, Faculty of Health and Medicine, Lancaster University, Lancaster, UK; [b]Department of Clinical Neuropsychology, Salford Royal Hospital, Salford, UK





*Per molti pazienti **l'accettazione della diagnosi dipende dall'idea che loro stessi hanno del disturbo**, e chi riesce ad accettarla ha le più alte probabilità di guarigione.*
*Ma perché questo accada, **è necessario che cambino prima tutti quei preconcetti** che comunemente investono chi soffre.*

Susan O'Sullivan

L'EFFETTO SULLA PROGNOSI

<u>Tra i fattori prognostici positivi</u>:

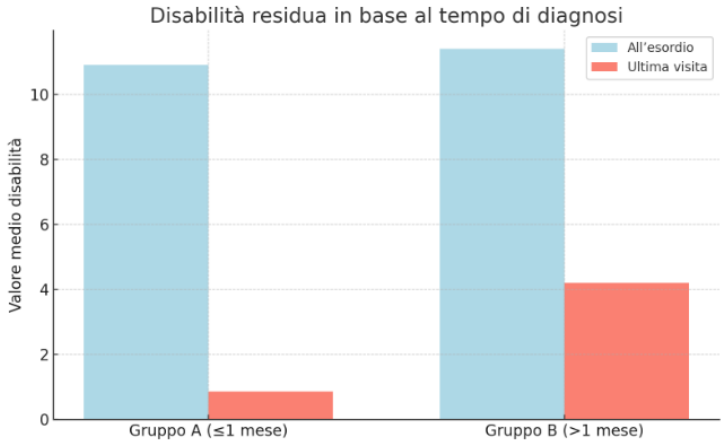
- *Età più giovane alla diagnosi – età pediatrica*
- *Diagnosi precoce*

<u>Tra i fattori prognostici negativi:</u>

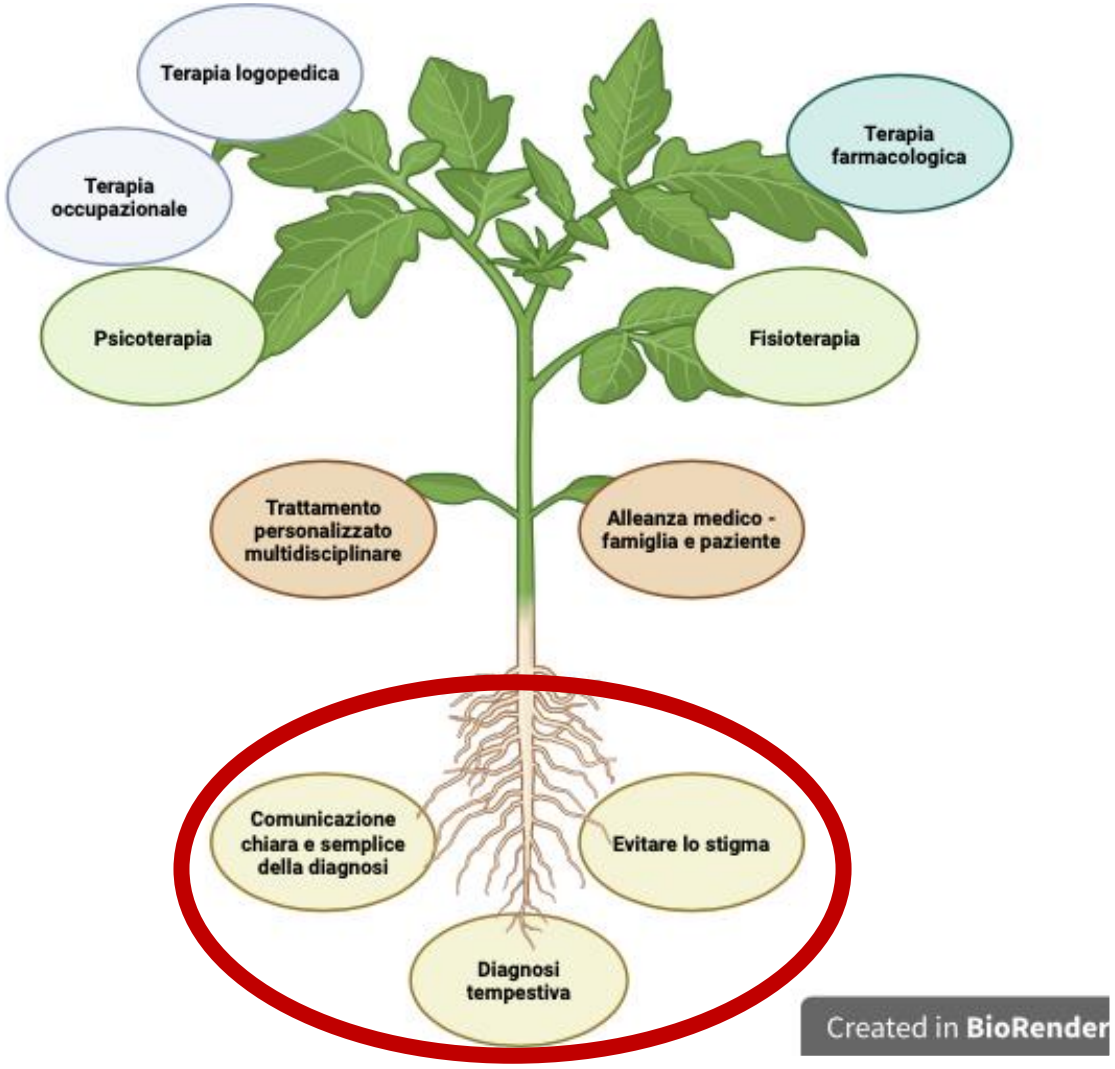
- *Ritardo diagnostico*
- *Lunga durata dei sintomi*

<u>Nei bambini</u>

tasso di remissione tra 43% e 81%
miglioramento nel 71–100%



Il trattamento dei FMD



by Antonio Lucia

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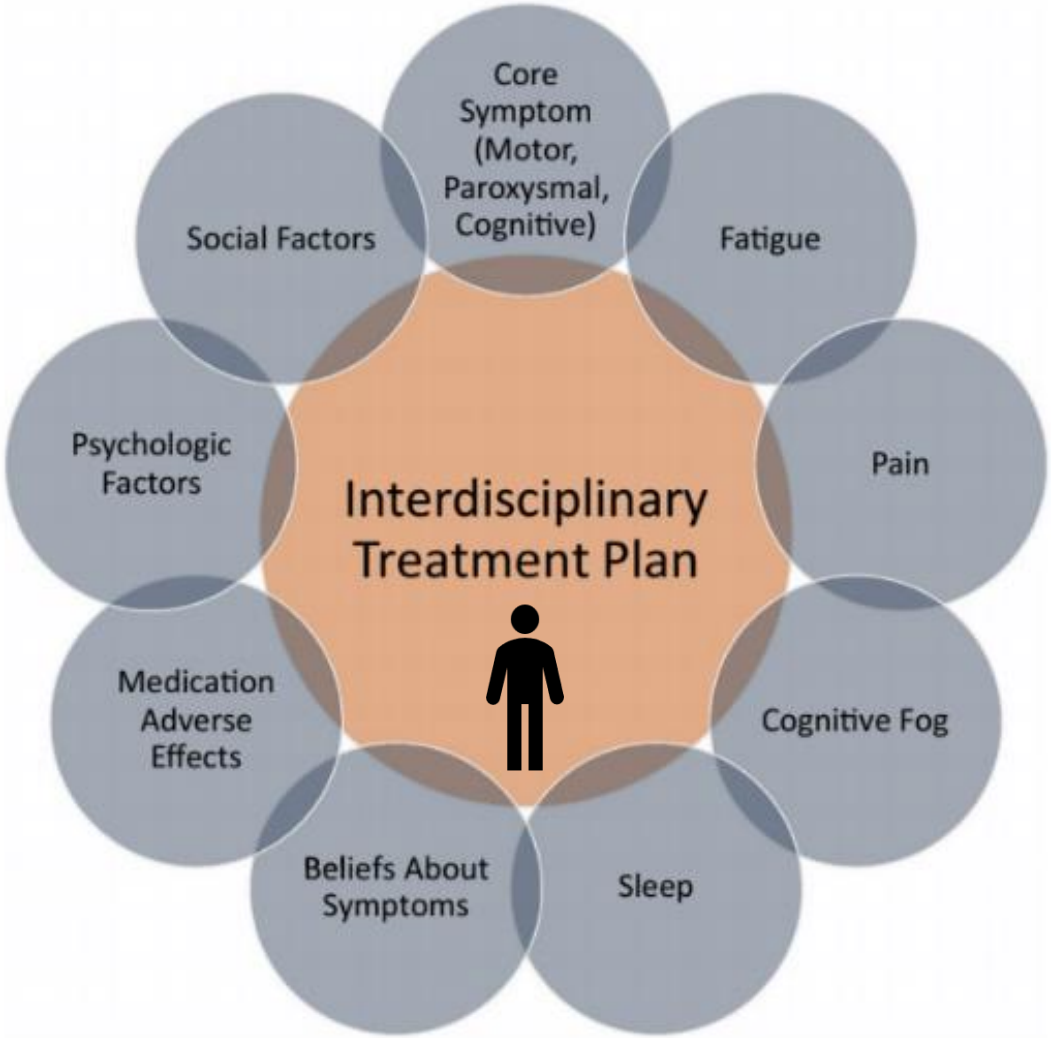
3. LA FORMULAZIONE CLINICA PERSONALIZZATA

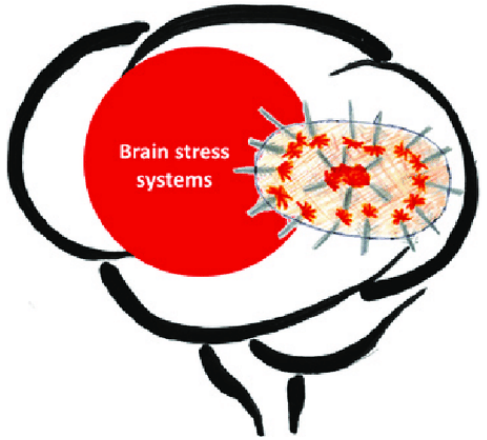


3. LA FORMULAZIONE CLINICA PERSONALIZZATA

«Stressors»

Anamnesi approfondita – COLLOQUI MIRATI CON PAZIENTE E FAMIGLIA

- contesto familiare
- relazioni con i pari
- epoca esordio sintomi (passaggio ciclo scolastico, menarca..)
- malattie (croniche e acute), traumi, interventi chirurgici
- esperienze traumatiche (separazione genitori, bullismo..)
- difficoltà scolastiche (es. DSA misconosciuto)
- fattori «stressanti» minori



Valutazione neuropsicologica

- Valutazione cognitiva
- Scale e questionari su aspetti comportamentali, psichiatrici, emotività..
- Scale di valutazione della Qualità di vita o dell'impatto sulla vita quotidiana

MODELLO BIO-PSICO-SOCIALE

	BIOLOGICI	PSICOLOGICI	PSICOSOCIALI
FATTORI PREDISPONENTI	Sesso F QI **Comorbidità** Familiarità	Disturbi umore, d'ansia, PTSD Personalità Alessitimia Attaccamento insicuro	Funzionamento familiare Malattie croniche familiari Esperienze negative Stato finanziario
FATTORI PRECIPITANTI	Privazione di sonno **Traumi fisici** **Malattie acute** **Interventi chirurgici**	Reazioni emotive a traumi/malattie.. Attacchi di panico Eventi dissociativi acuti	Lutti familiari Separazione genitori Perdita lavoro Altre esperienze traumatiche
FATTORI di MANTENIMENTO	Dolore cronico Fatica cronica Abitudini motorie anomale Decondizionamento	Inclinazione negativa Scarse aspettative Percezione di irreversibilità sintomi Ipervigilanza	**Incertezza diagnostica** **Pregiudizio sociale** Beneficio di «essere malato» Scarso coordinamento cure Scarso supporto familiare

ESORDIO DISTURBO FUNZIONALE

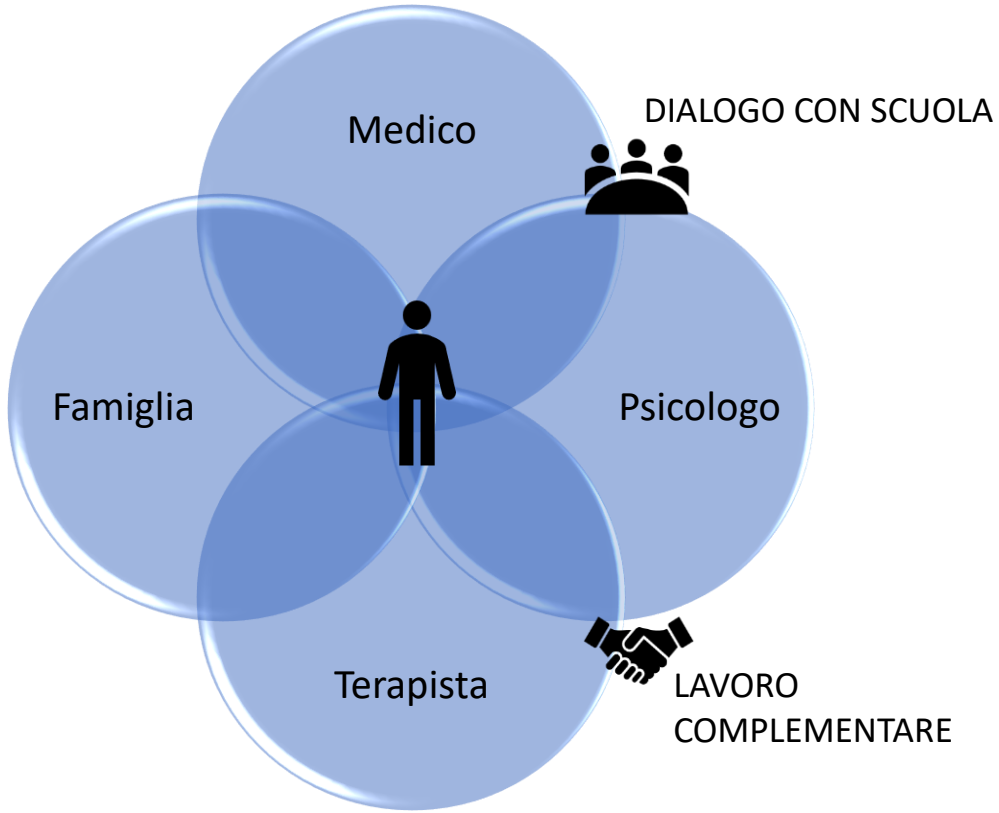
PROTOCOLLO DI VALUTAZIONE IRCCS BESTA

Valutazione neuropsicologica

- Valutazione **cognitiva** (WISC IV,WAIS-IV)
- Questionario su **stile attributivo** (sense of agency)
- CRI: Strategie di **coping** (approccio/evitamento)
- Test di **funzionamento socio-emotivo** (narrativo di Roberts)
- NEPSY-II: **attenzione e funzioni esecutive**, **teoria della mente**, **riconoscimento emozioni**
- Stile di **attaccamento**
- Questionari orientati a **comorbidità psichiatriche** (Child Behavior Checklist e Youth Self Report, SAFA, PID)
- TSCC: questionario su eventi **traumatici**
- **Funzionamento globale**: CGAS, CGI

*+ Protocolli di ricerca sulla **granularità emotiva** e sui **processi decisionali***

Valutazione neurofunzionale



TAKE HOME MESSAGES

- **Utilizzo di STRUMENTI e CRITERI per la diagnosi dei FMD**
- **La corretta DIAGNOSI e la sua ACCETTAZIONE sono il primo passo nel TRATTAMENTO dei FMD**
- **La COMUNICAZIONE è FONDAMENTALE**
- **Inquadramento COMPLESSIVO è necessario prima dell'avvio al trattamento**

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