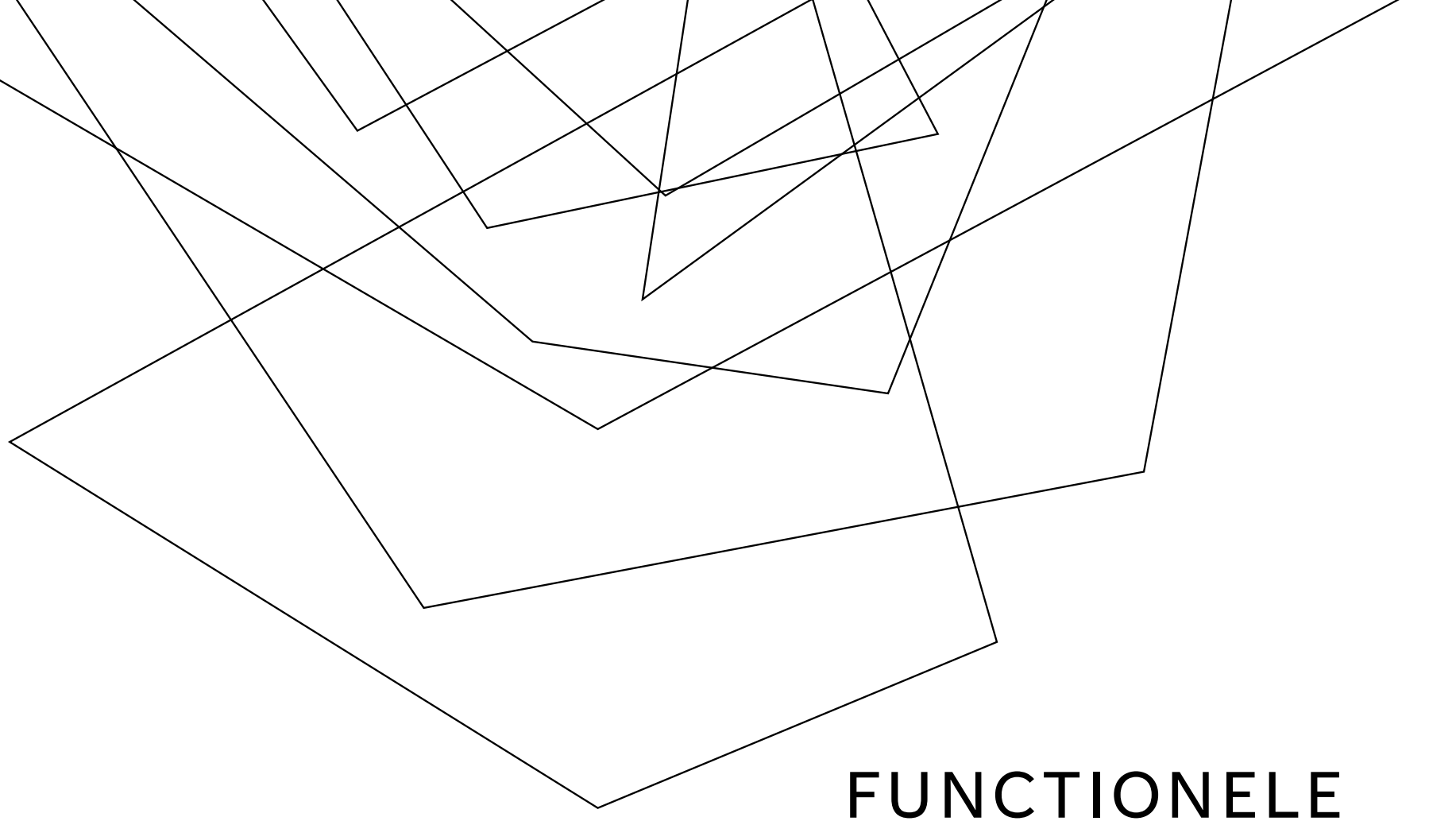


FUNCTIONELE NEUROLOGISCHE STOORNIS

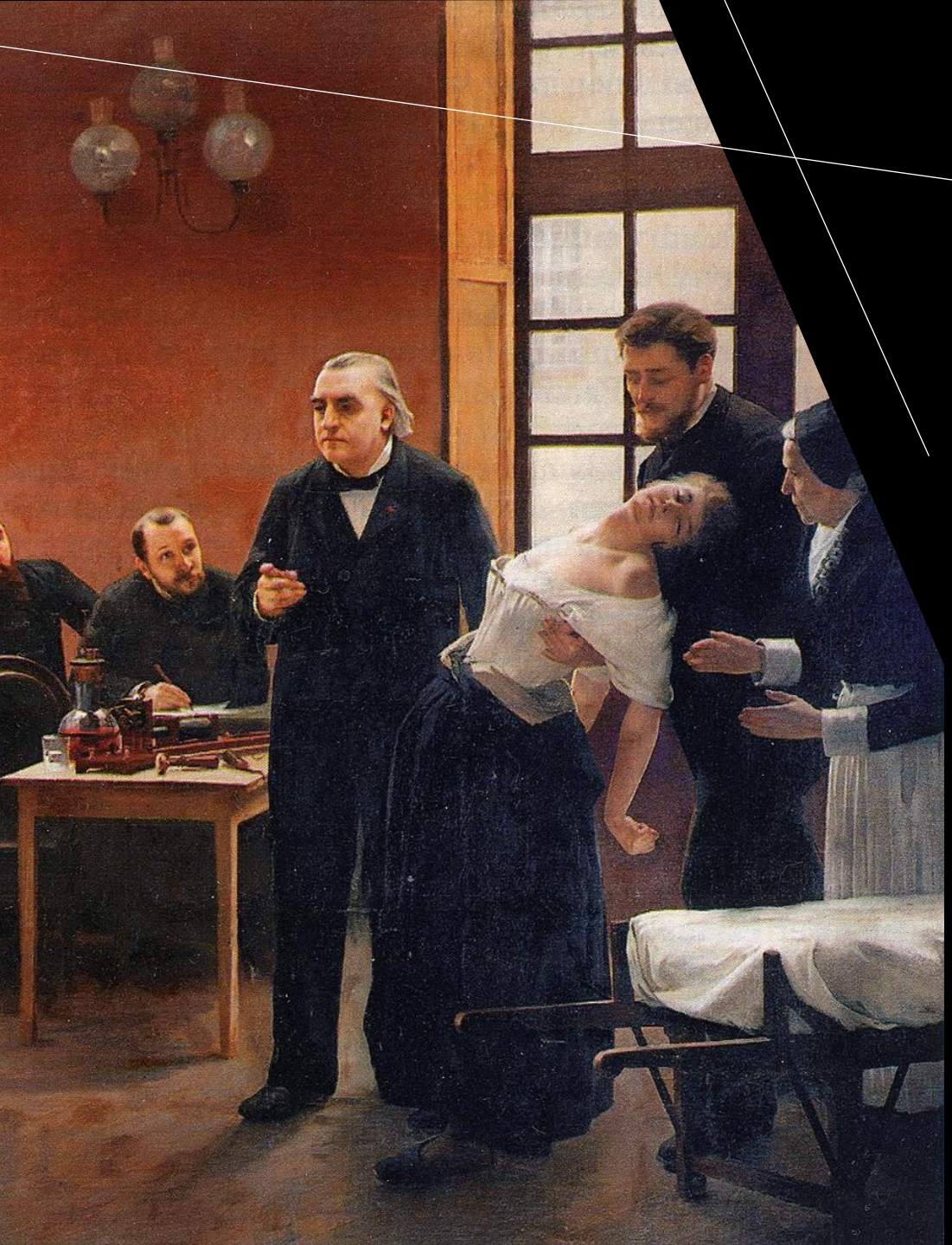
ONDERWERPEN

Wat is FNS?

Diagnose

Mechanisme

Behandeling



WAT IS FNS?

CASUS

Patiënte van 23 jaar

- Sinds COVID-infectie een jaar geleden veel vermoeidheid en post-inspannings klachten
- Nu progressief krachtsverlies, begonnen aan de voeten, opgetrokken naar de armen

CASUS

Neurologisch onderzoek

- Parese graad 3-4 van armen en benen
- Wisselend aanspannen
- Positief Hoover’s sign
- Kan wel tot staan komen
- Geen gevoelsstoornissen
- Intacte reflexen, VZR plantair

FUNCTIONELE NEUROLOGISCHE STOORNIS

Definitie

Neurologische symptomen

Klinische tekenen van ‘functionele’ aard

Vaak (maar niet altijd) getriggerd door:

Lichamelijk letsel of

Traumatische gebeurtenissen

Psychiatrische symptomen/aandoening/stressor

WAT IS HET NIET?

Nagebootste stoornis

Chronische pijn- / vermoeidheidsyndroom

DIAGNOSE

DIAGNOSE

Positieve kenmerken

Variatie in tijd en plaats

Pijn

Specifiek tijdsbeloop

Localisatie

Aanvullende factoren

‘Overprikkeldheid’

Angst/somberheid

Anticipatie of suggestie (placebo / nocebo)

PARESE

Slepende gang

Wisselend aanspannen

Hypertonie ipv slap

Hoover’s sign

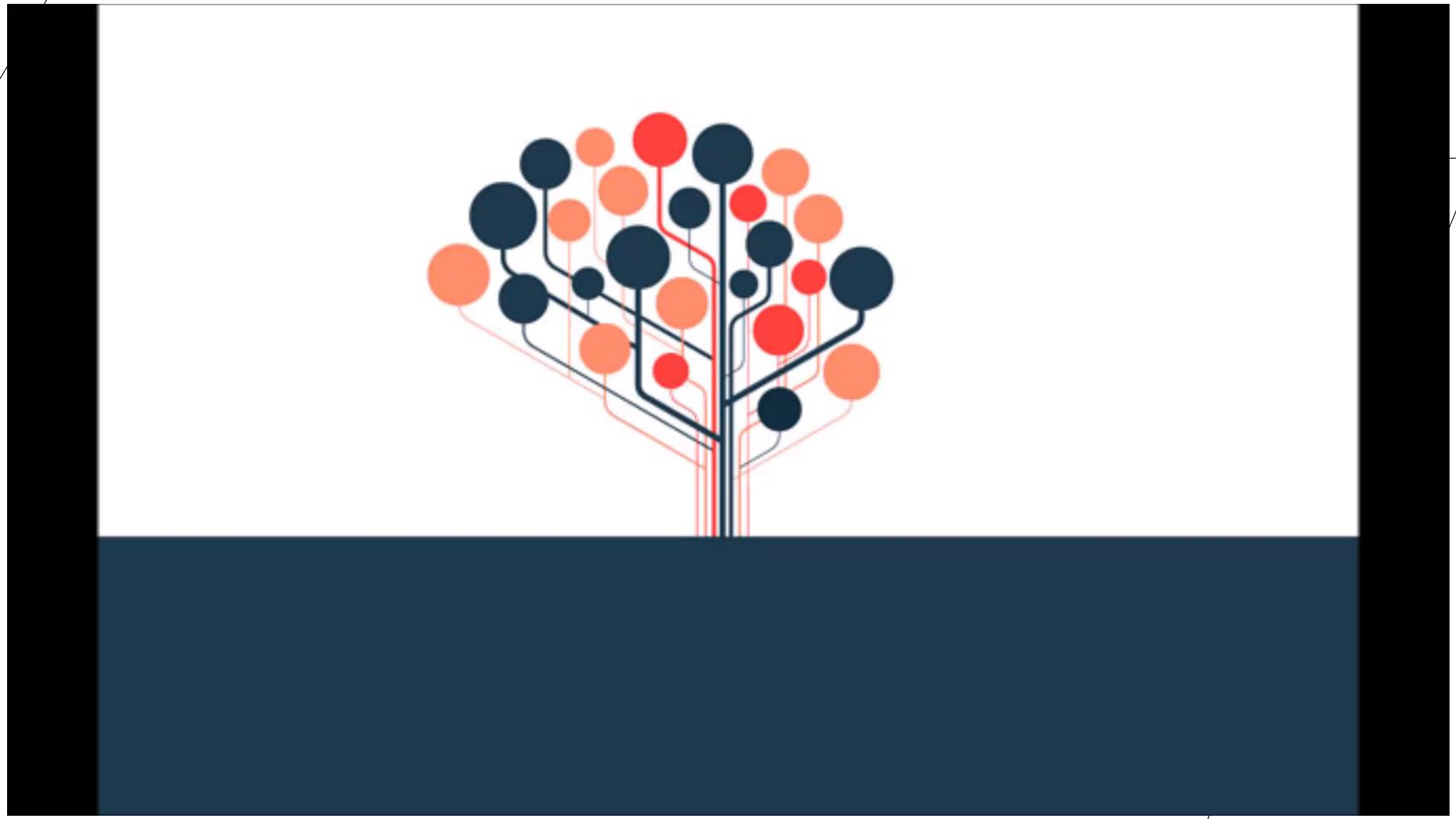
Barré zonder pronatie

Finkelstein et al 2021 Academic emergency magazine

TREMOR/SCHOKKEN

Entrainment

Afleidbaarheid



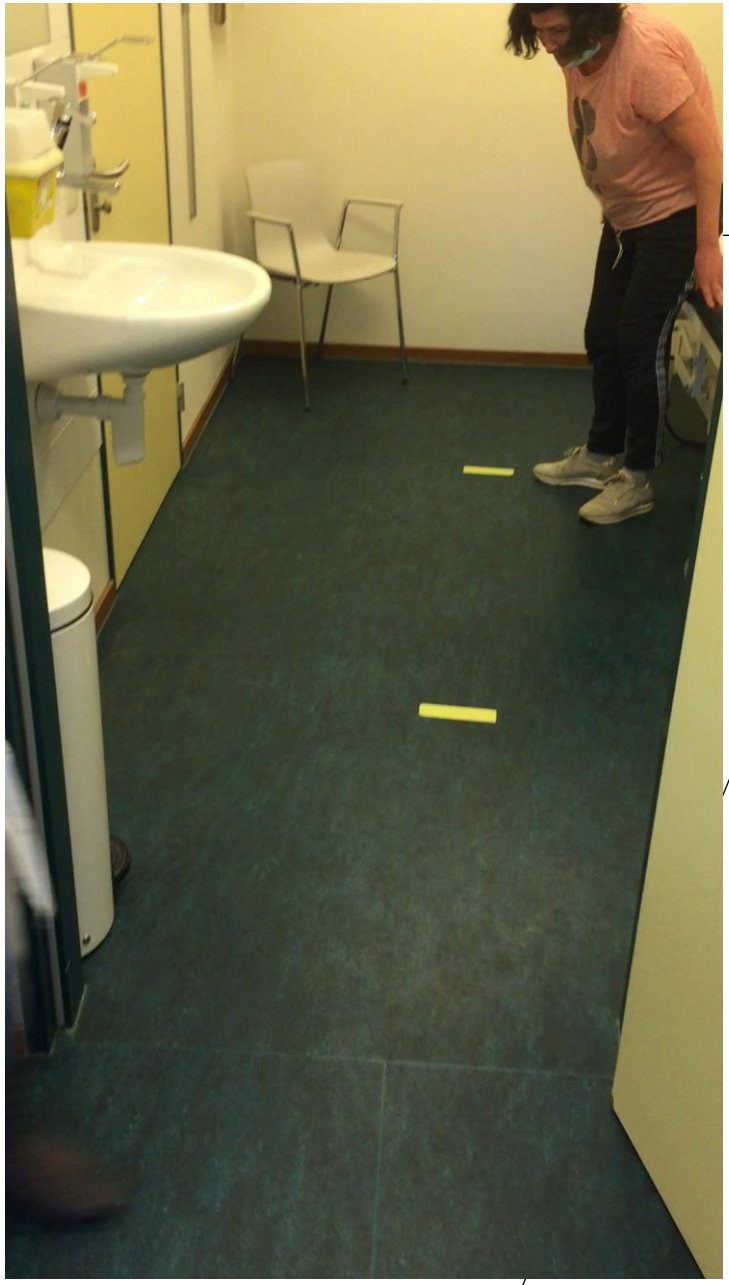
LOOPSTOORNIS

Variabel

Onstabiele gang met goede voetpositionering

Afleidbaar / beinvloedbaar (achteruit/dansend)

Video uit Nonnekes et al. 2020 *Neurology*



FUNCTIONELE COGNITIEVE STOORNIS

Functional Cognitive Disorder

Diagnosis, Treatment, and Differentiation from Secondary Causes of Cognitive Difficulties

Verónica Cabreira, MD, Laura McWhirter, PhD*, Alan Carson, MD

VALKUIL: NEUROLOGISCHE CO-MORBIDITEIT

Functional neurological disorder and multiple sclerosis: a systematic review of misdiagnosis and clinical overlap

Dennis Walzl[1] · Andrew J. Solomon[2] · Jon Stone[1]

CASUS

17 jarig meisje, SEH presentatie

Op school een aantal keer vandaag hetzelde ‘vreemde’ gedrag: naar de docent toegelopen, gebrabbeld, smakken. Paar minuten, daarna weer hersteld. Geen trekkingen. Nu vermoeid.

Veel stress rondom examens.

Jaren geleden ook al eens gehad in stressvolle periode.

DIAGNOSE?

DISSOCIATIEVE / NIET-EPILEPTISCHE AANVALLEN

Dissociatie

Waarschuwingssignalen

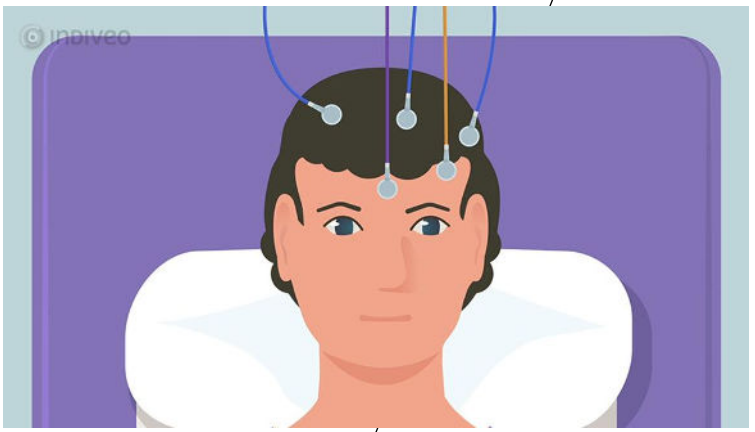
Ogen dicht

Tongbeet niet-lateraal / geen tongbeet

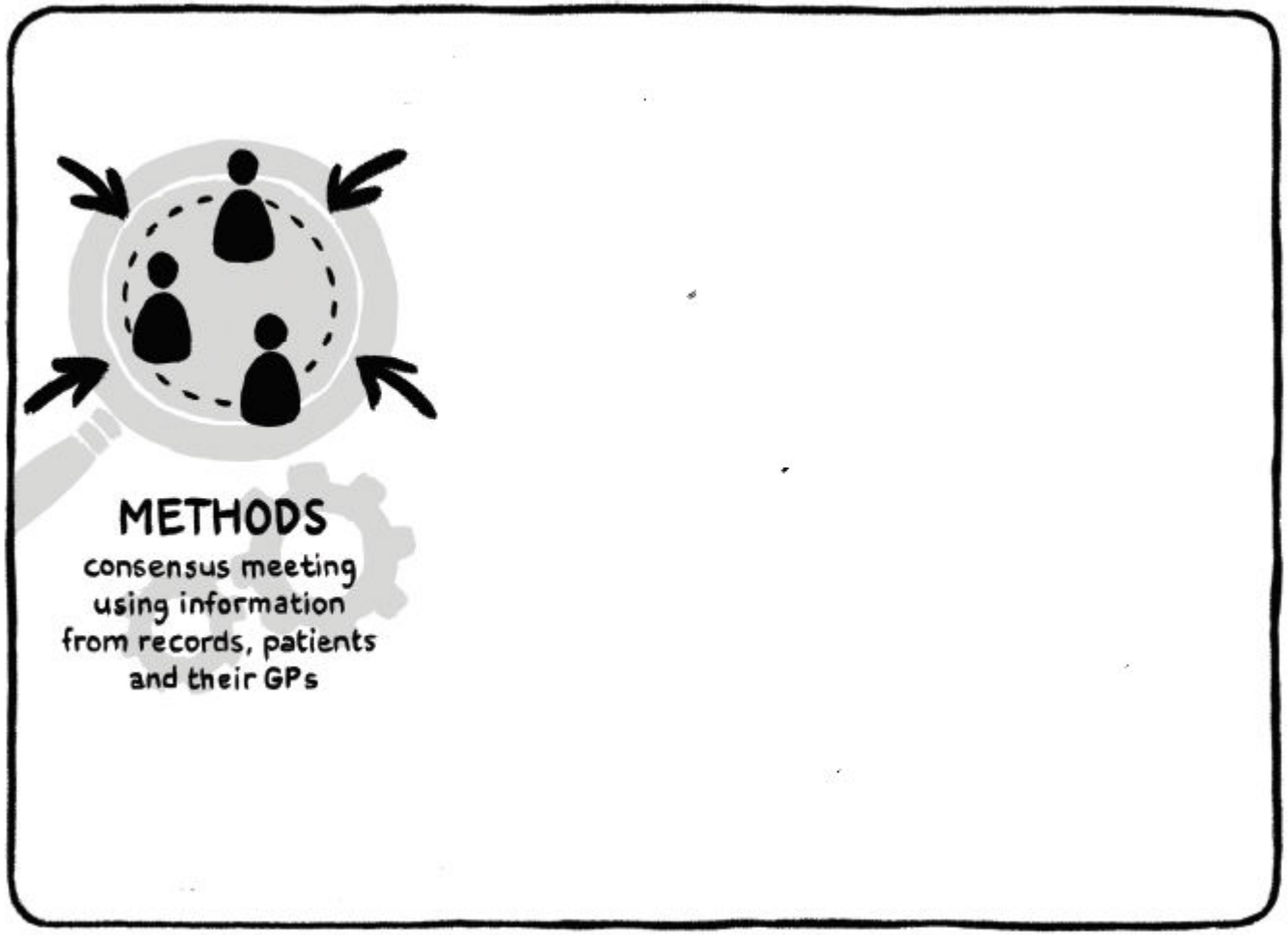
Duur van de aanval

Urine-verlies

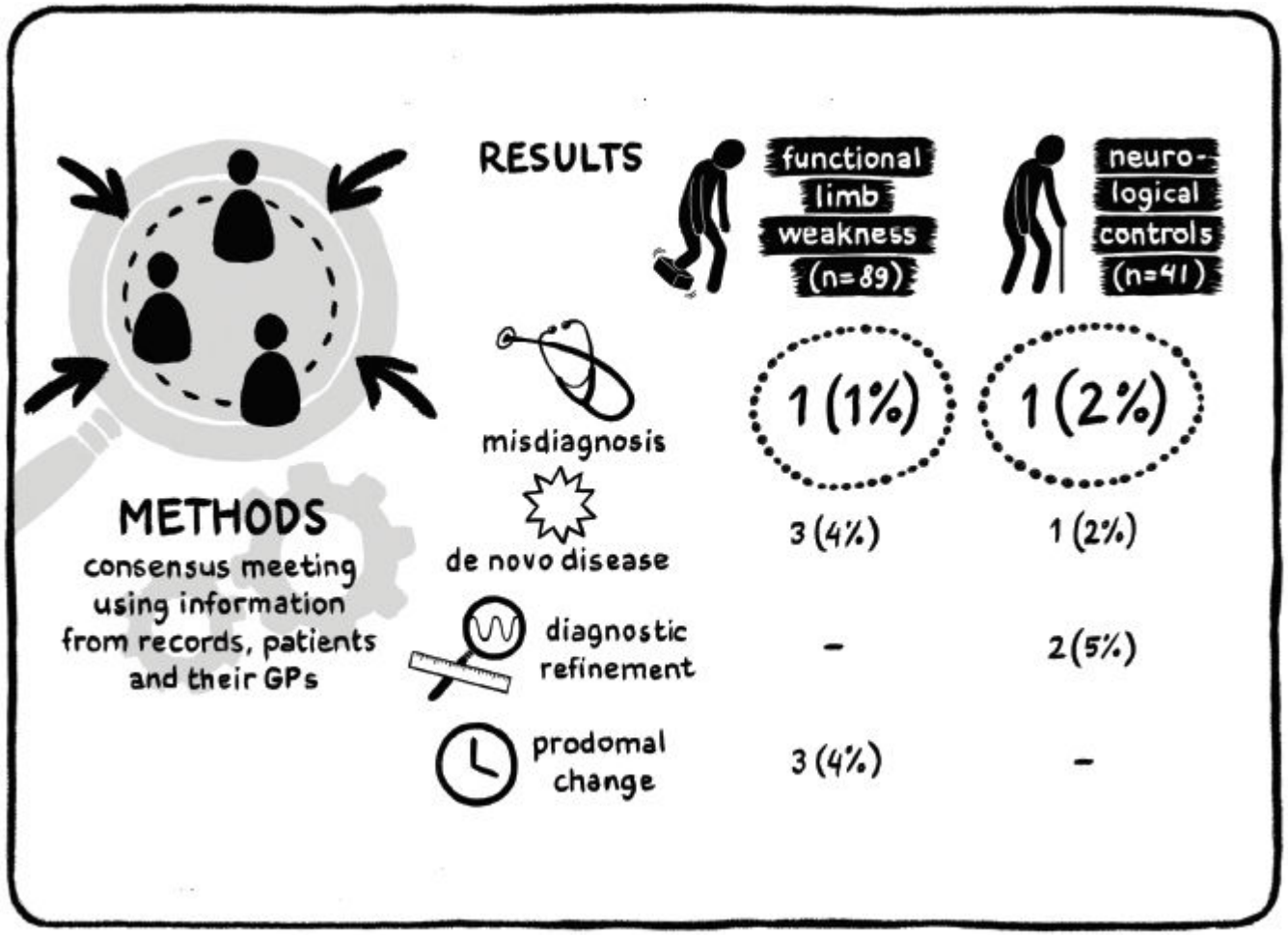
Eventueel: EEG tijdens aanval



MISDIAGNOSE



MISDIAGNOSE



MISDIAGNOSE

Epileps

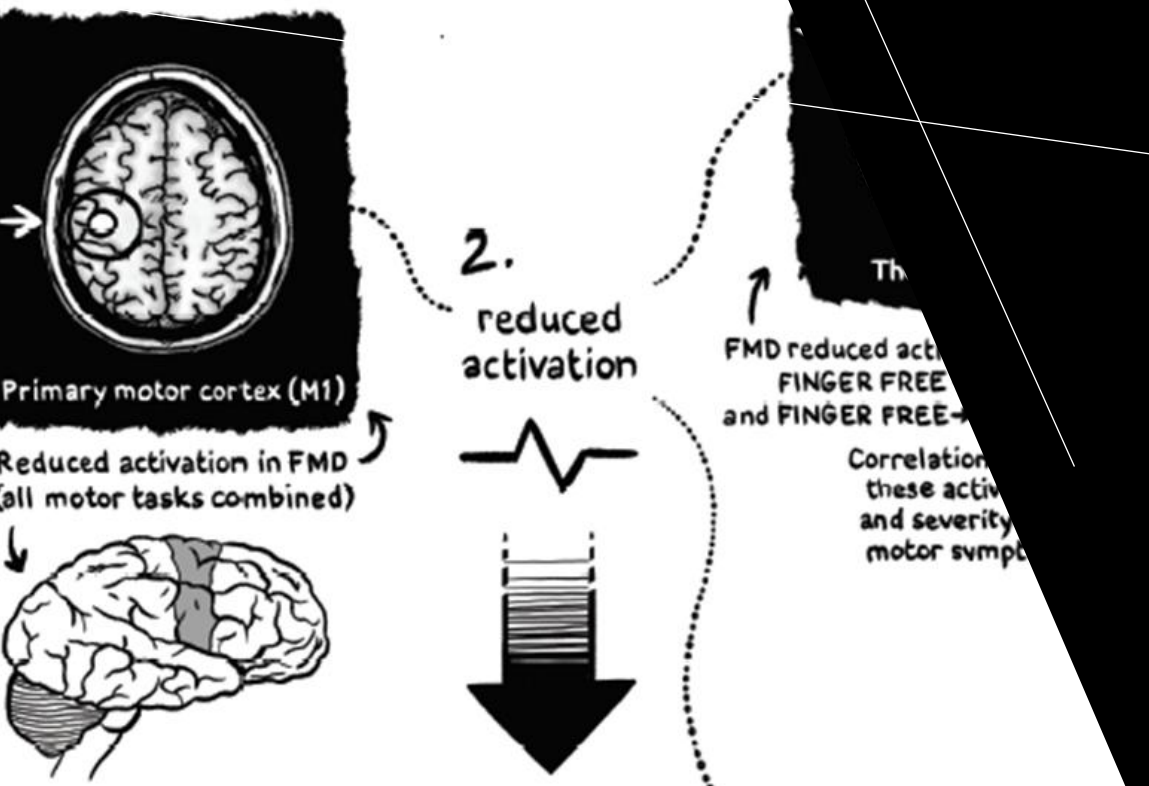
FULL-LENGTH ORIGINAL RESEARCH

Psychogenic nonepileptic seizures treated as epileptic seizures in the emergency department

Alexander Lehn[1,2] | Emily Watson[1,2] | Elizabeth G. Ryan[3,4] | Maryon Jones[1] | Vince Cheah[5] | Sasha Dionisio[1,2]

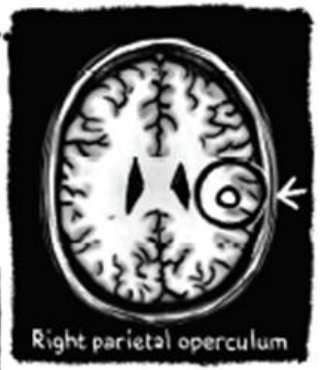
Key points

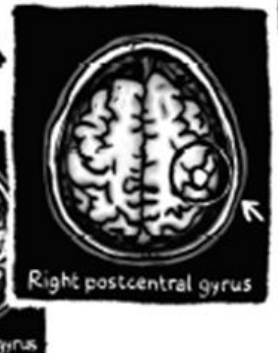
- We assessed the rate of psychogenic nonepileptic seizures among patients presenting to an emergency department with presumed seizures.
- In the group of all presentations with presumed epileptic seizures (n = 151/157 total presentations), 26.5% (n = 40) were actually PNES and 55.6% (n = 84) were epileptic seizures.
- Of the 196 presentations in the "status" group (total n = 213) who were diagnosed as epilepsy only, 43.4% (n = 85) presented with epileptic seizures and 49.5% (n = 97) presented with PNES.
- We identified several factors from routinely accessible data to help risk stratify between epileptic seizures and PNES.
- Psychogenic nonepileptic seizures are common, and although they can cause major disability, they often remain undiagnosed.

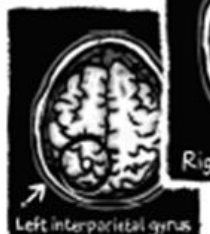


2.
reduced
activation

Reduced activation in patients
(patients < controles) in several parietal areas







MECHANISME

FUNCTIONELE NEUROLOGISCHE STOORNIS

Etiologie: waarom?

Mechanisme: hoe?

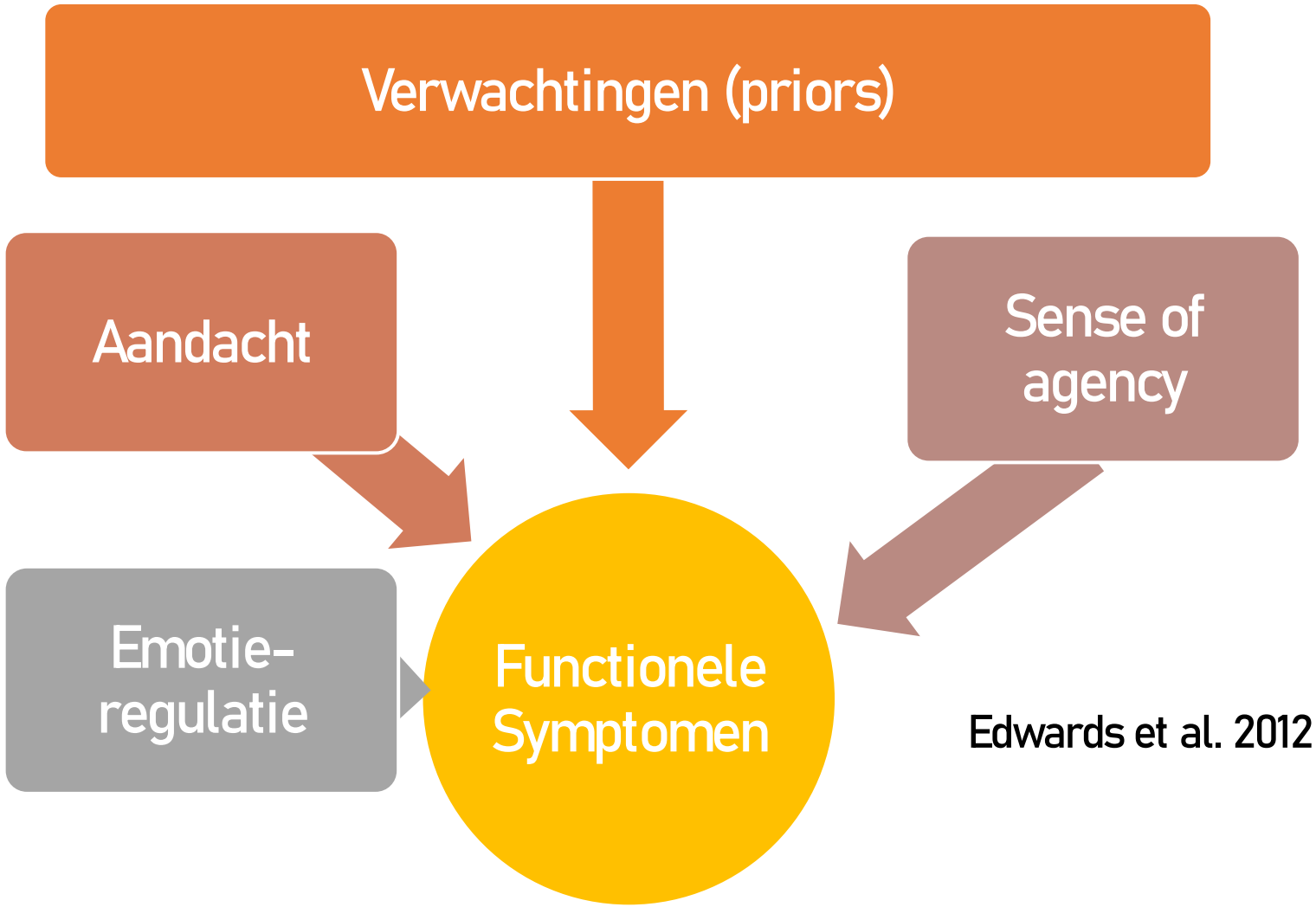
ETIOLOGIE: MULTI-FACTORIEEL

Etiologische factoren

Triggers

In stand houdende factoren

MECHANISME: HOE?



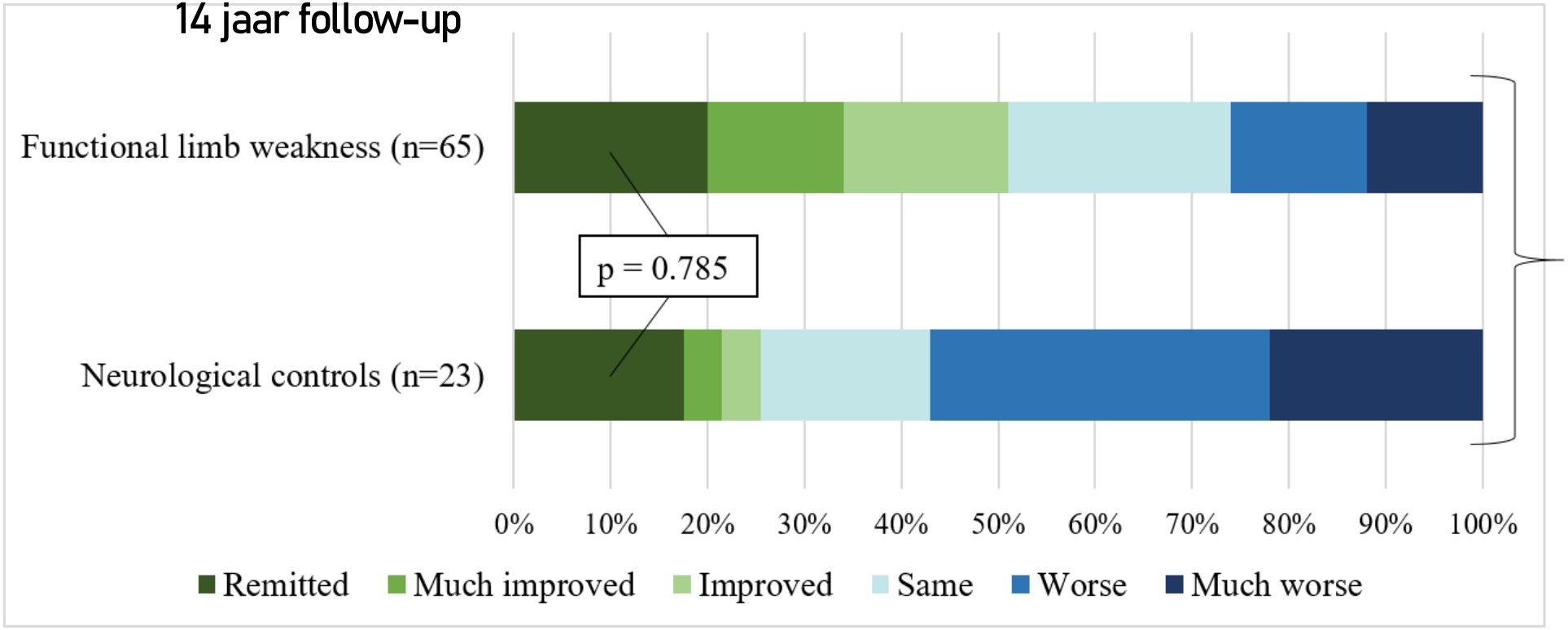
Edwards et al. 2012 Brain

PROGNOSE

Baseline:
107 functionele parese
46 neurologische controles
38 gezonde controles

68% follow-up rate

14 jaar follow-up



Neurologie

Psychiatrie

Onverklaarde klachten (SOLK)

Functioneel

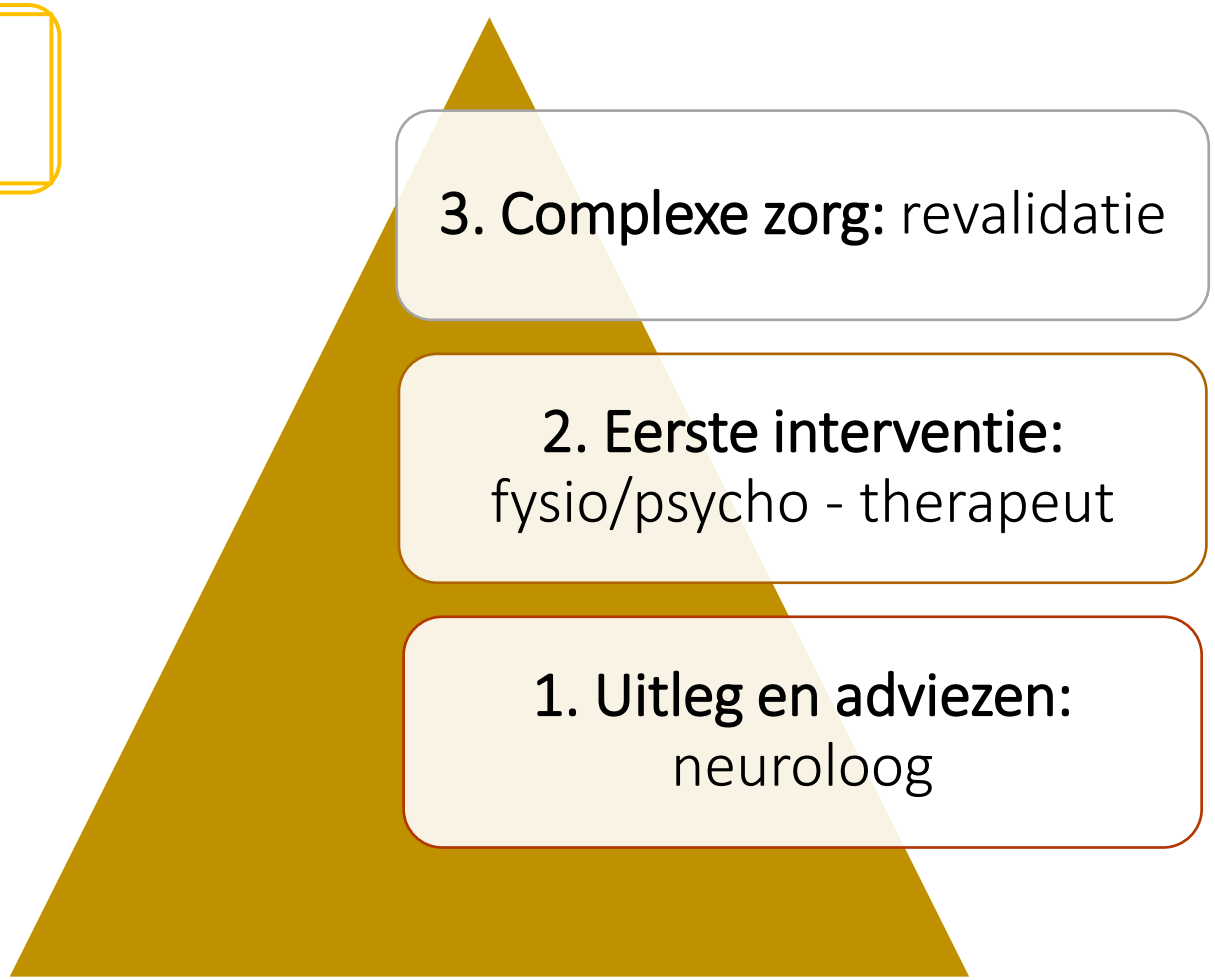
Conversie

Psychogeen

Hystery

BEHANDELING

Stepped care



Diagnose	• Mechanisme (functie / aansturing) • Komt vaak voor • Etiologische / in stand houdende factoren • Evt tekening/metafoor
Reversibiliteit	• Positieve kenmerken in onderzoek • Potentieel reversibel
Erkenning	• Symptomen niet nagebootst en/of beperkend • Eigen gedachten patiënt: wat het niet is
Behandeling	• Actieve rol patiënt in behandeling • Waarom fysio/logo/psycho-therapie, wat houdt dat in?
Vervolg/info	• Website / folder • Brief aan vervolgbehandelaren en evt patiënt

UITLEG

www.Neurosymptoms.org

www.Functionelebewegingsstoornissen.nl

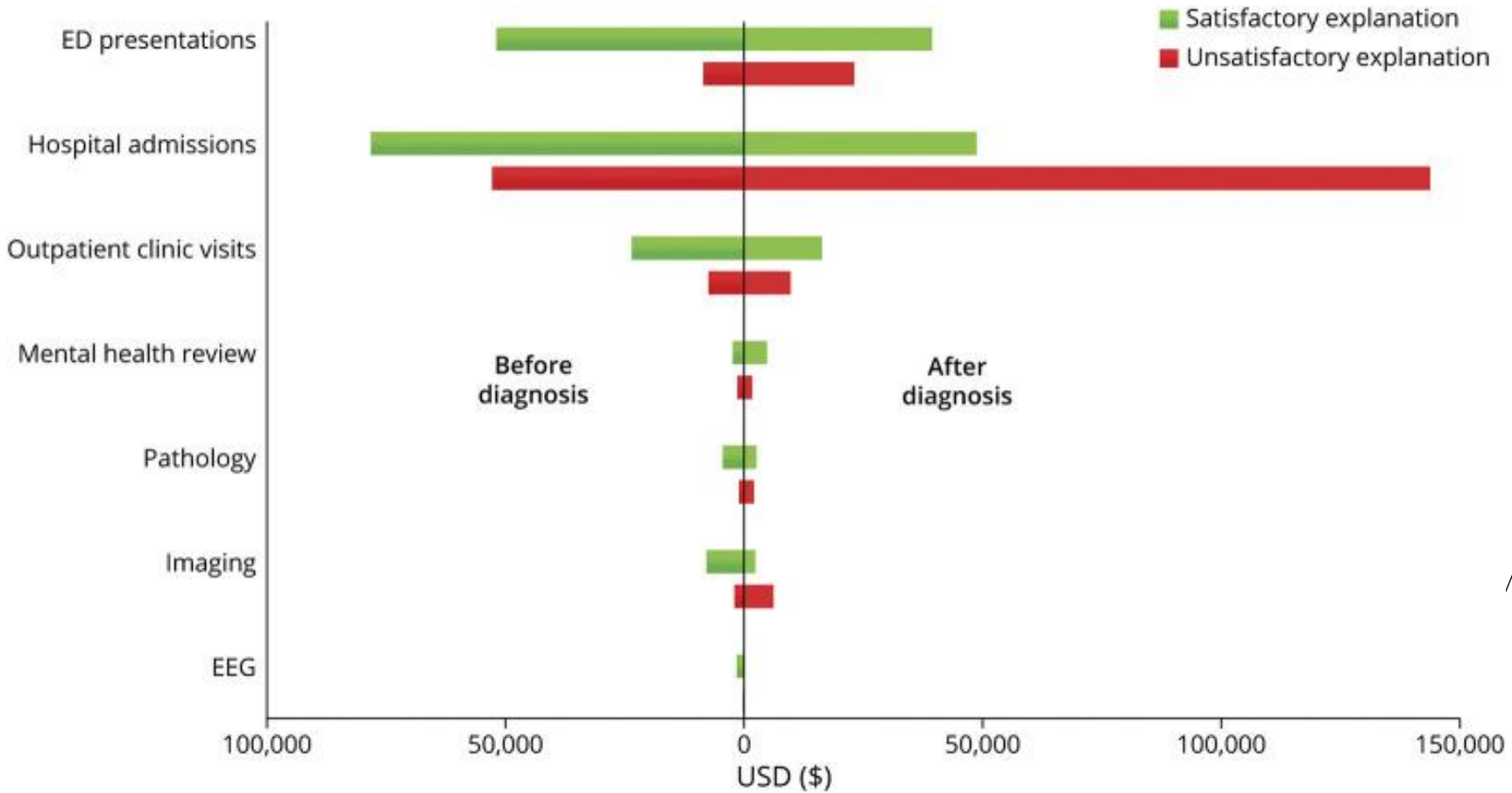
UITLEG BELANGRIJK..

Neurology®
Clinical Practice
A peer-reviewed clinical neurology journal for the practicing neurologist
Home Articles Issues Practice Current Practice Buzz
HARE February 2023; 13 (1) RESEARCH ARTICLE

Health Care Utilization in Functional Neurologic Disorders

Impact of Explaining the Diagnosis of Functional Seizures on Health Care Costs

Tjerk J. Lagrand, Maryon Jones, Anne Bernard, Alexander C. Lehn



MAAR GEEN BEHANDELING OP ZICH:

Education and Self-help on the internet for functional motor disorders, A randomised Trial (SHIFT)

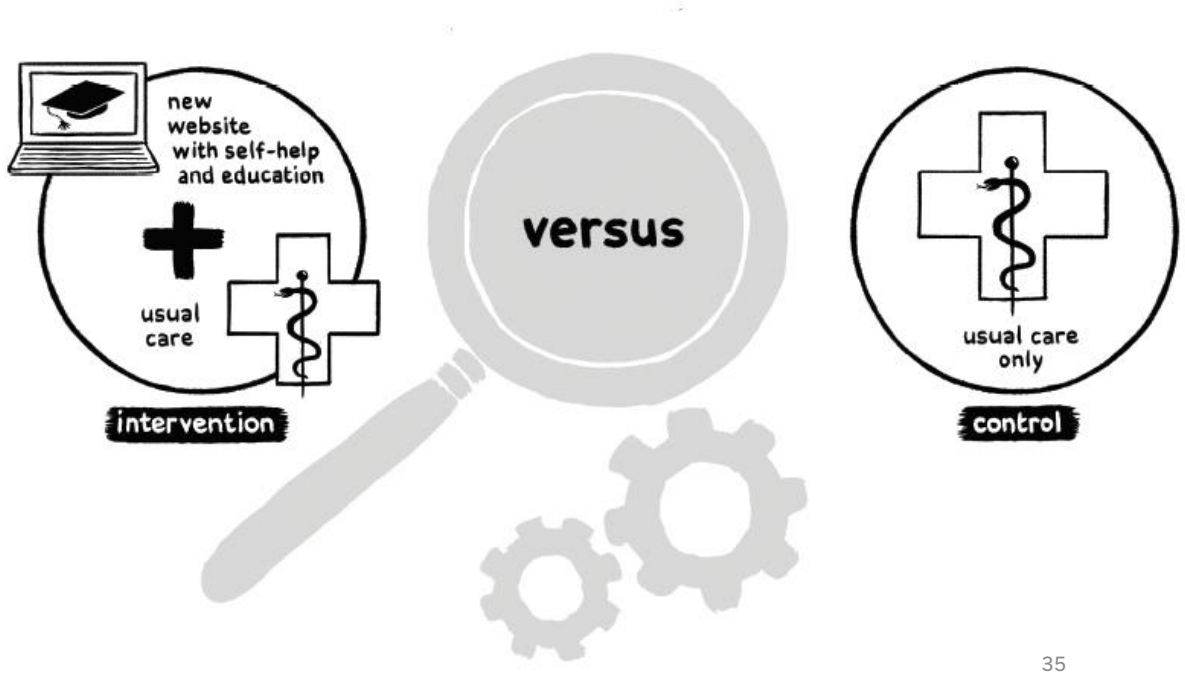
N=186, 31 Nederlandse centra

Intention to treat analyse:

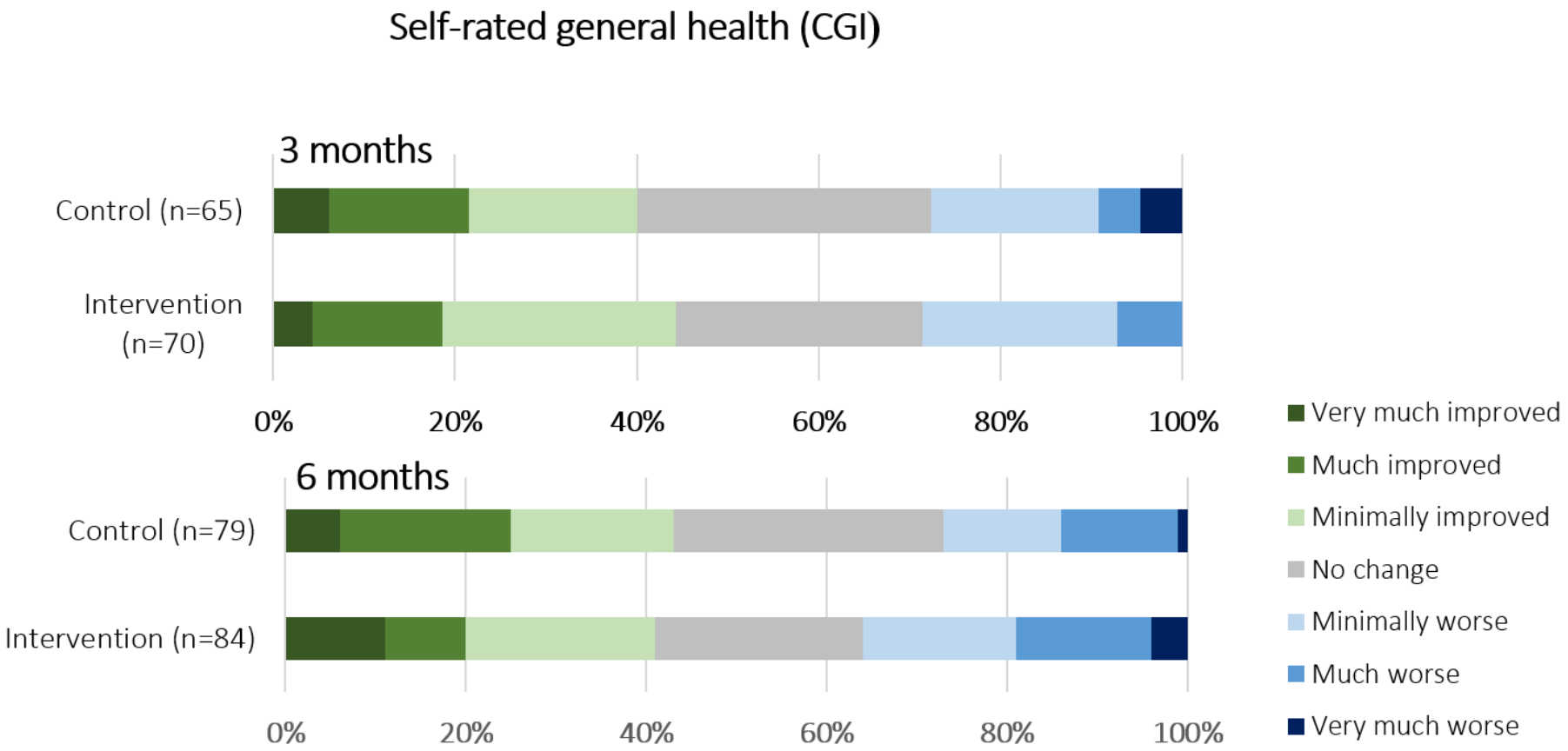
6 maanden:

Interventie: n=84 Controles: n=79

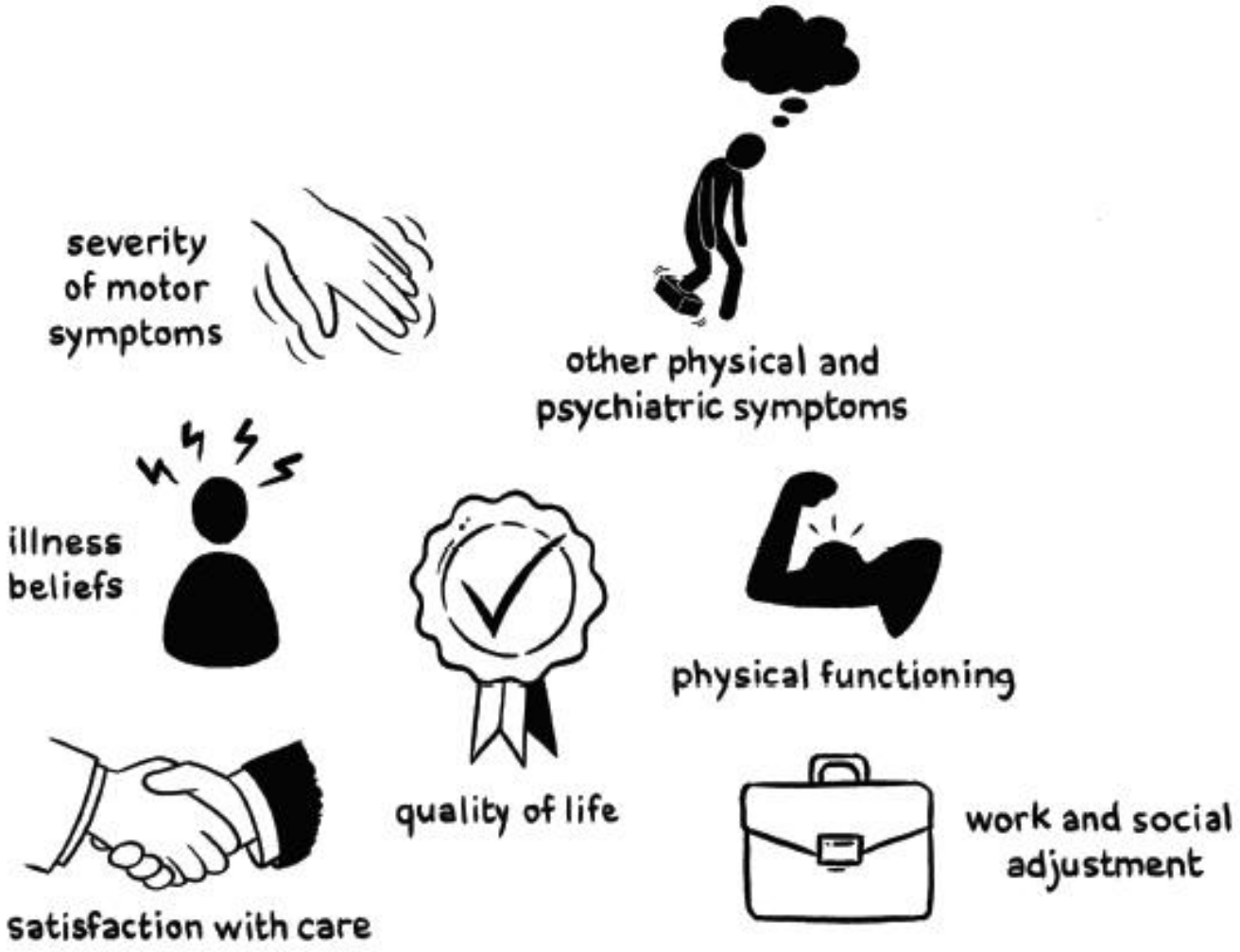
Hoofd uitkomst: zelf-gerapporteerde algehele gezondheid
Secundair: symptomen, psychiatrie, illness perception

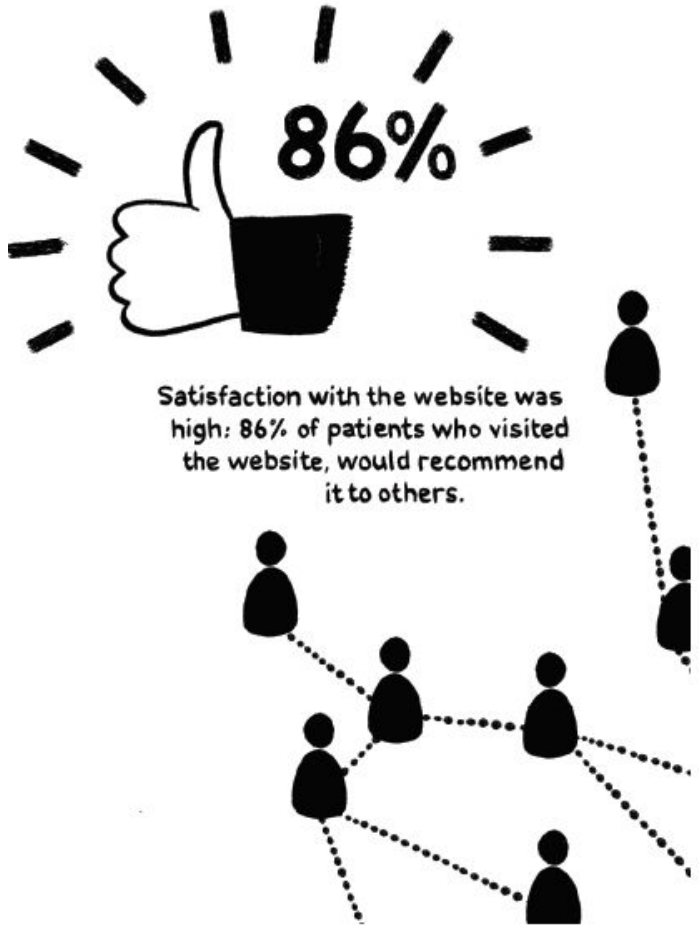


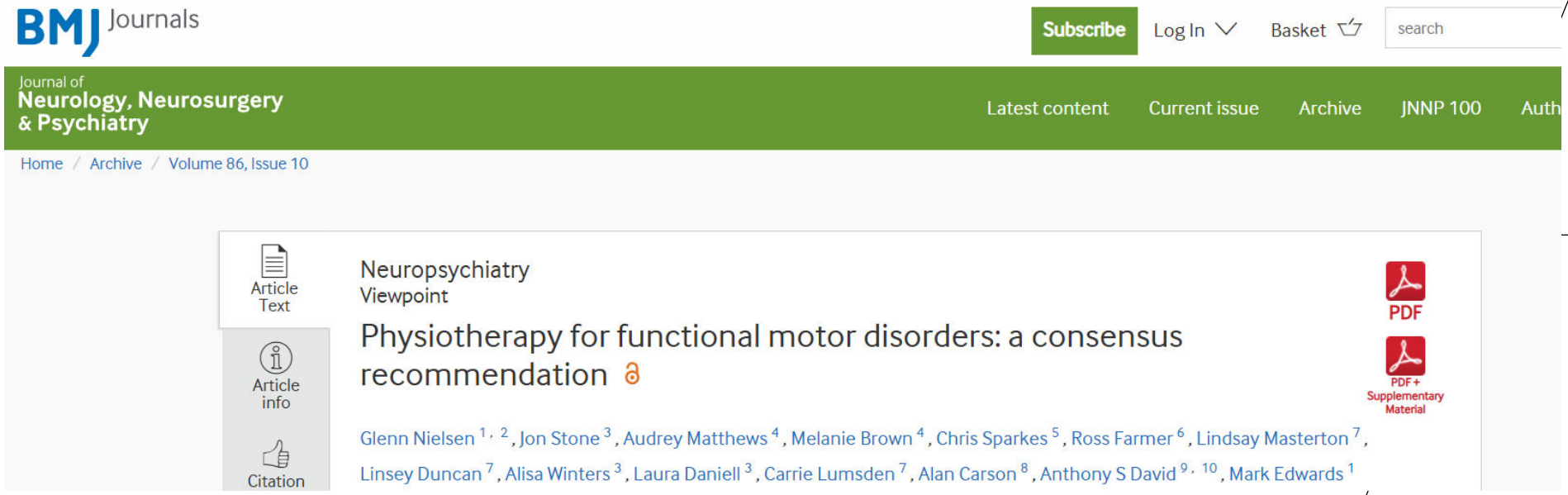
PRIMAIRE UITKOMSTMAAT



SECUNDAIRE UITKOMSTEN







FYSIO/OEFEN THERAPIE

Gespecialiseerde oefentherapie / fysiotherapie

Effectief (Nielsen et al. 2015, **Fysio4FMD** Nielsen et al 2024)
op zelf-gescoord algeheel functioneren

- Opnieuw aanleren normale / automatische bewegingen
- Impliciet CBT: in stand houdende factoren aanpakken
- Premotor urge herkennen en onderdrukken

FYSIO/OEFEN THERAPIE

Physio4FMD trial

N=138 gespecialiseerde fysiotherapie,

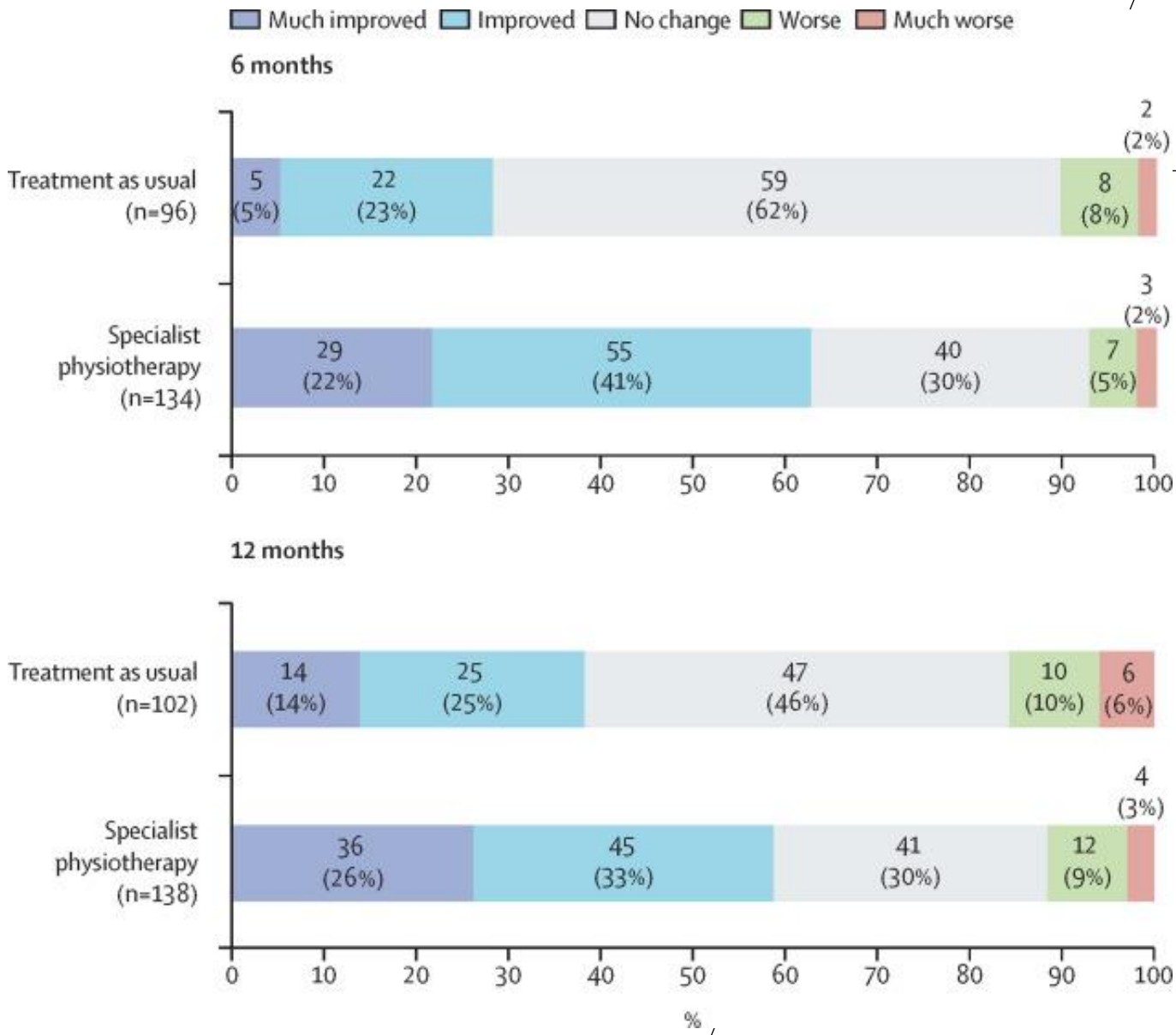
9 sessies + follow-up

N=103 ‘usual care’

Hoofduitkomst fysiek functioneren

(SF36): geen verschil tussen de groepen

Secundaire uitkomst:



PSYCHOTHERAPIE

Technieken

CGT

Psychodynamische therapie

Hypnose

ACT

Oefentherapie

...

Aangrijpingspunten

In stand houdende factoren

Normaliseren functie: mentale oefeningen

Ingrijpen op triggers

Waarschuwingssignalen verdragen

Coping

...

PSYCHOTHERAPIE

PSYCHOLOGISCHE THERAPIE

Meta-analyse Gutkin et al (2020 JNNP):

19 studies, 12 CBT, 7 psychodynamische therapie.

11 voor/na studies, 8 RCT

Bewegingsstoornissen, maar ook niet-epileptische aanvallen

Kleine samples, max 186 patiënten (CODES)

In algemeen effect medium-grootte op fysieke symptomen, mentale gezondheid en functioneren, voor beide types therapie.

HYPNOSE / KATALEPSIE

Movement Disorders CLINICAL PRACTICE
Official Journal of the International Parkinson and Movement Disorder Society

RESEARCH ARTICLE | Open Access

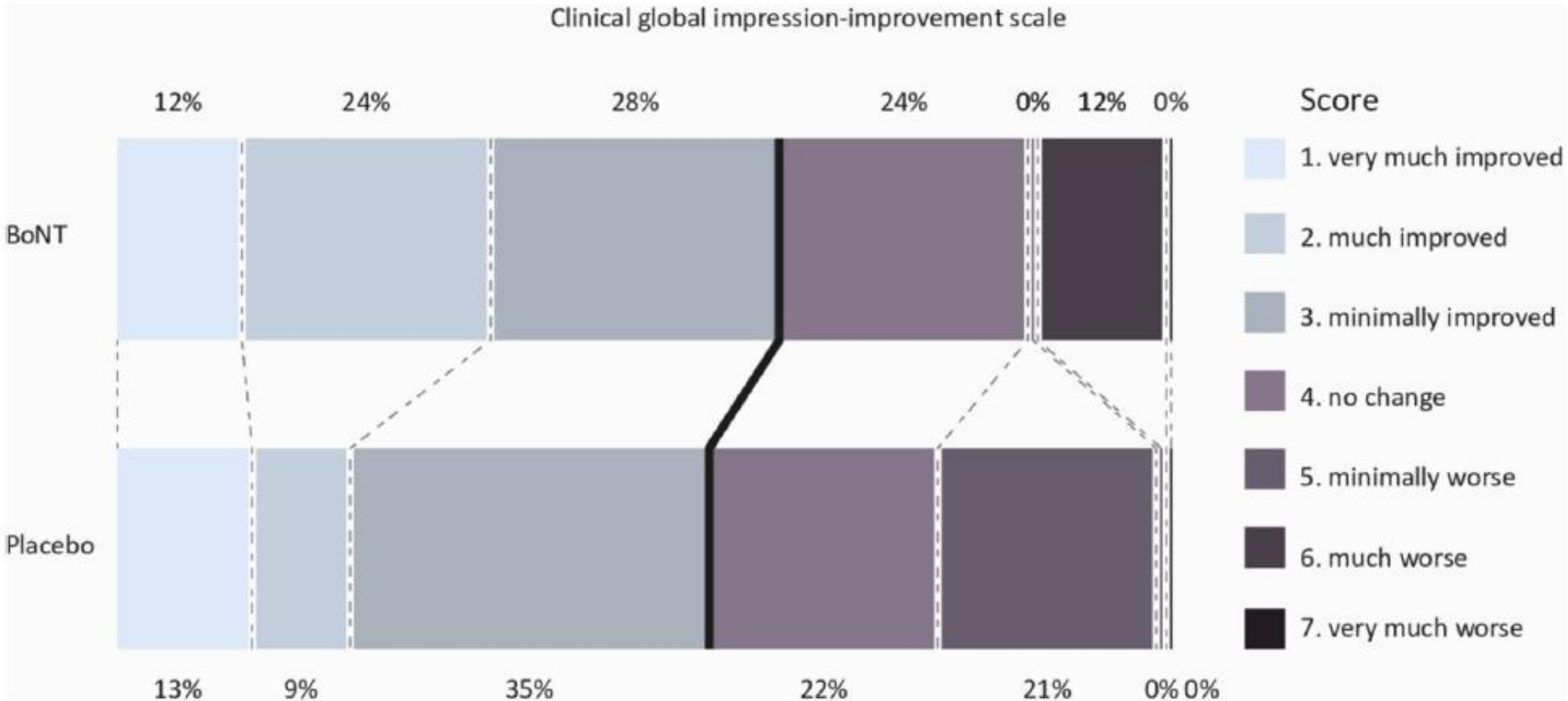
Efficacy of Hypnosis and Catalepsy Induction in Functional Neurological Disorders

Marleen Ieke Tibben MSc, Amras van Opdorp MSc, Wojtek Bialek MSc, Judith Schaap MSc, Marina A.J. Tijssen MD, Maarten J.M. Merkx Phd

First published: 20 November 2023 | https://doi.org/10.1002/mdc3.13934

TABLE 1 *Mean and Standard Deviations over time over treatment course (N = 46)*

	M (SD)				
Measure	**T0**	**T1**	**T2**	**T3**	**T4**
PMDRS	18.36 (11.03)	18.40 (11.46)	11.97 (8.61)	8.92 (7.23)	7.02 (7.6)
SQ-48	48.71 (24.91)	47.69 (26.93)	42.81 (26.61)	40.13 (28.40)	37.73 (28.99)
WHOQoL-BREF	82.77 (11.71)	81.07 (15.10)		87.31 (14.78)	89.49 (15.21)
Physical health	17.82 (3.63)	18.05 (5.10)		21.47 (5.08)	21.48 (5.59)
Psychological health	19.65 (3.30)	18.59 (4.42)		20.12 (4.07)	20.70 (4.32)
Social	10.76 (2.69)	10.39 (2.62)		10.63 (2.43)	10.92 (2.43)
Environment	28.52 (4.83)	28.52 (5.20)		30.24 (5.32)	30.21 (5.44)


Clinical global impression-improvement scale
12%
24%
28%
24%
0%
12%
0%
BoNT
Placebo
13%
9%
35%
22%
21%
0%
0%
Score
1. very much improved
2. much improved
3. minimally improved
4. no change
5. minimally worse
6. much worse
7. very much worse

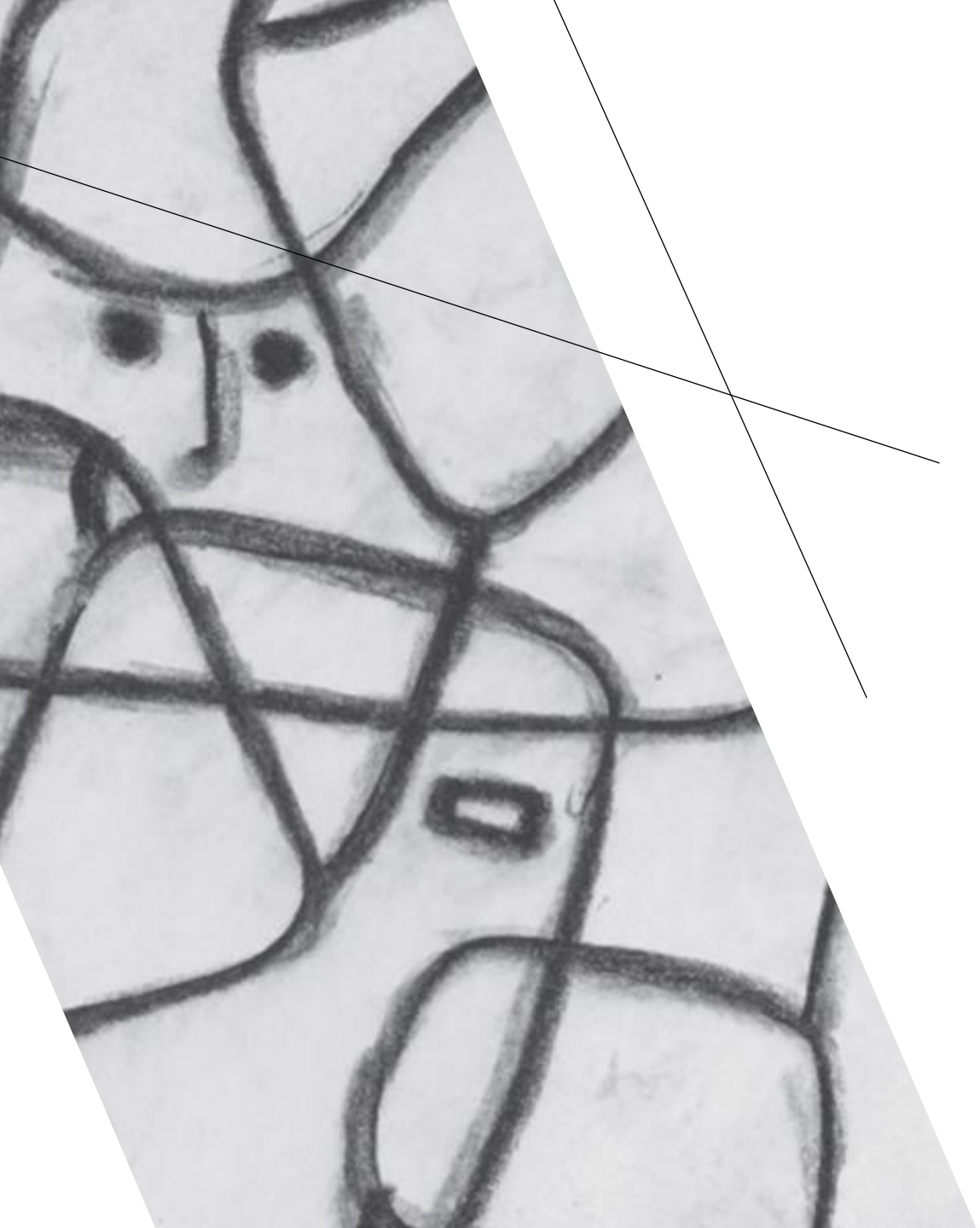
MULTIDISCIPLINAIR / REVALIDATIE

Verschillende studies internationaal (McCormack 2013, Jordbru 2014, Czarnecki 2017)

Opname / poliklinisch / combinatie

Effectief

Weinig beschikbaar



VRAGEN?