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Common factor model in physiotherapy for non-specific low back pain

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Acknowledgments:

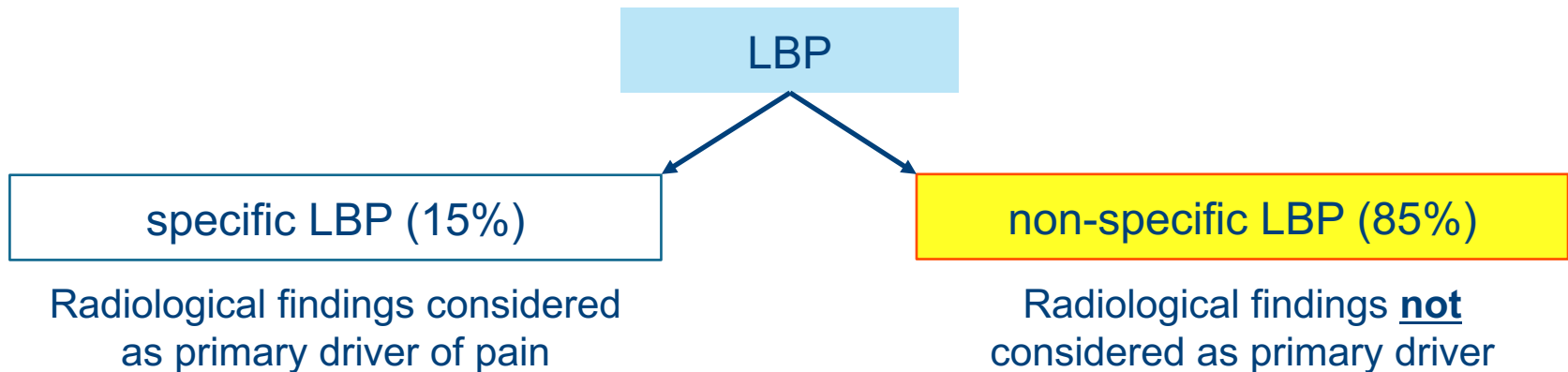
Prof Dr Michel Probst (Promoter,)

Prof Dr Wim Dankaerts (Co-Promoter)



Low back pain

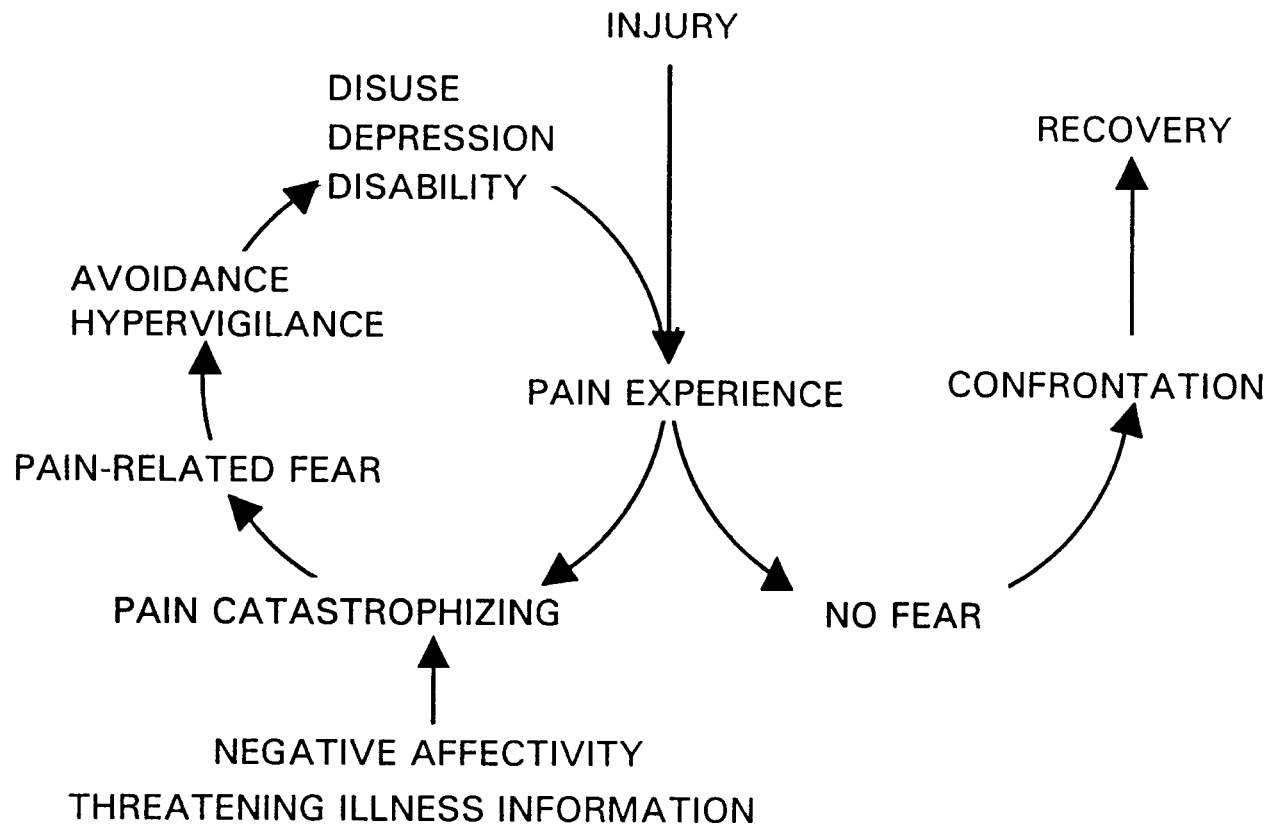
- Very high prevalence of low back pain (LBP)
 - 1-month prevalence 23% (Hoy, 2012)
- About 85% of LBP cases are classified as non-specific LBP. (Waddell, 2004)



Non-specific chronic low back pain (NSCLBP)

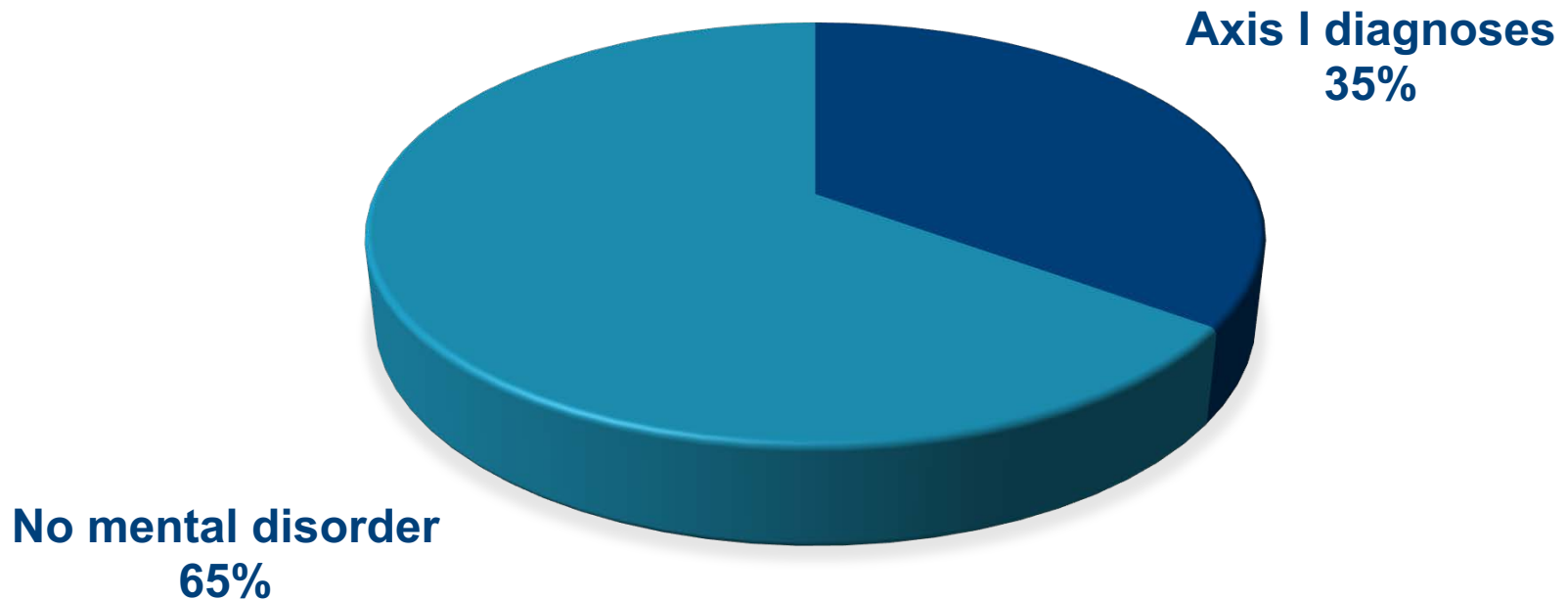
- Biopsychosocial problem (Waddell, 2004)
- Associated with a complex interaction of factors:
 - Psychological factors (Vlaeyen & Linton, 2000; Melloh, 2011)
 - Maladaptive postures and movement patterns (Dankaerts, 2009)
 - Neurophysiological factors (Wand, 2011)
 - Pathoanatomical factors (Brinjikji, 2015)
 - Life-style factors (Briggs, 2011)
 - Social factors (Lallukka, 2014)

Fear-Avoidance Model



(Vlaeyen & Linton, 2000)

CO-MORBID MENTAL ILLNESSES IN PEOPLE WITH CHRONIC LOW BACK PAIN



(Von Korff, 2005; Gerhardt, 2006)

Cognitive Behavioural Therapy

Different psychological models for chronic pain: (Brunner, 2013; McCracken, 2014)

- Operant conditioning (Fordyce, 1976)
- Traditional cognitive behavioural therapy (Beck, 1976)
- Fear-avoidance (Vlaeyen & Linton, 2000)
- Psychological flexibility (Hayes, 2004)

Psychological models help to explain how therapies work,
but are there other factors explaining therapeutic change?

Psychotherapy



- Saul Rosenzweig (1936):
 - Positive treatment outcomes are primarily determined by factors shared by different treatments.
 - Theoretically different treatments are equally efficacious.

And the Dodo bird said: „*Everybody has won, and all must have prizes*“
(Lewis Carrol, *Alice in Wonderland*. 1865)

Common factors in psychotherapy

Summary of suggested common factors (Grencavage & Norcross, 1990)

5 Categories

Client characteristics

→ positive expectancies

Therapist qualities

→ therapist's personality

Change processes

→ catharsis, practice of new behaviours

Treatment structure

→ use of rituals

Therapeutic relationship

→ development of an alliance/relationship

Patient Therapist Interaction



Physiotherapist

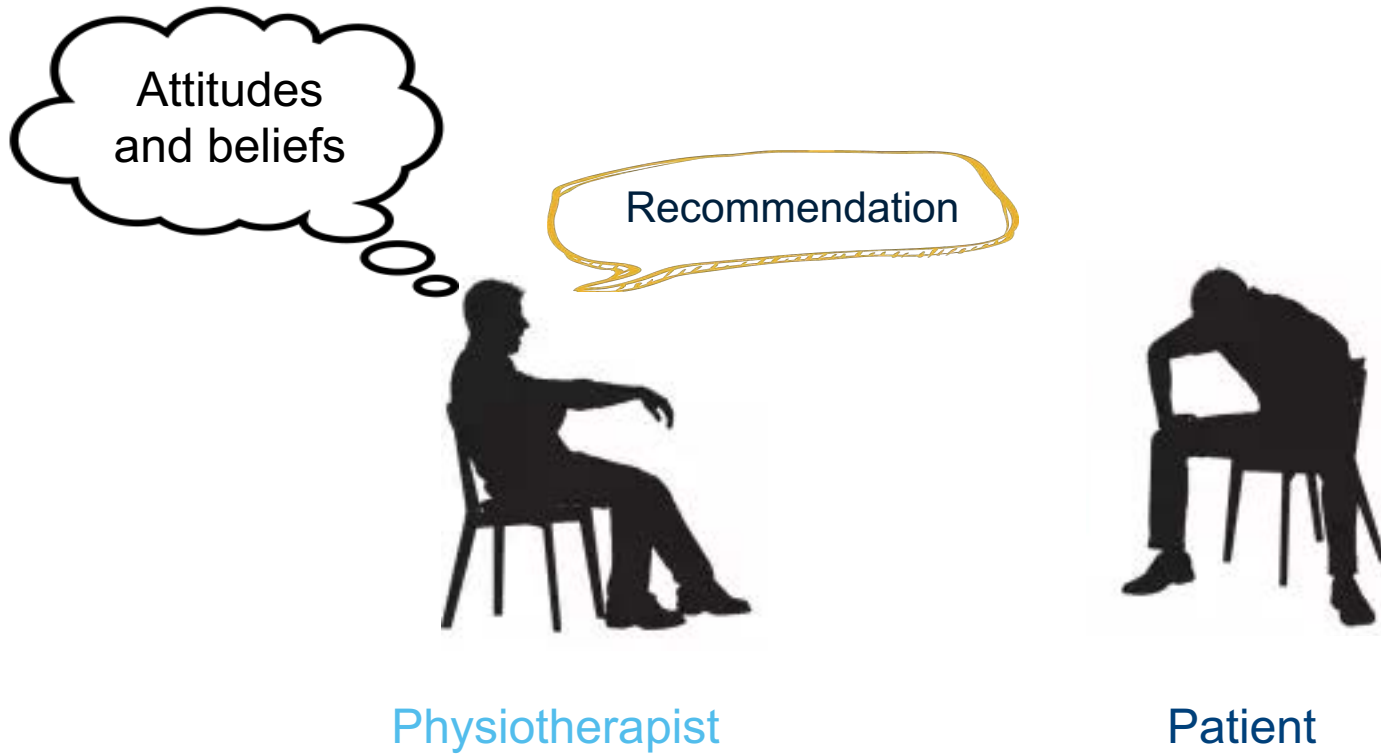


Patient

Common factors in physiotherapy for NSCLBP

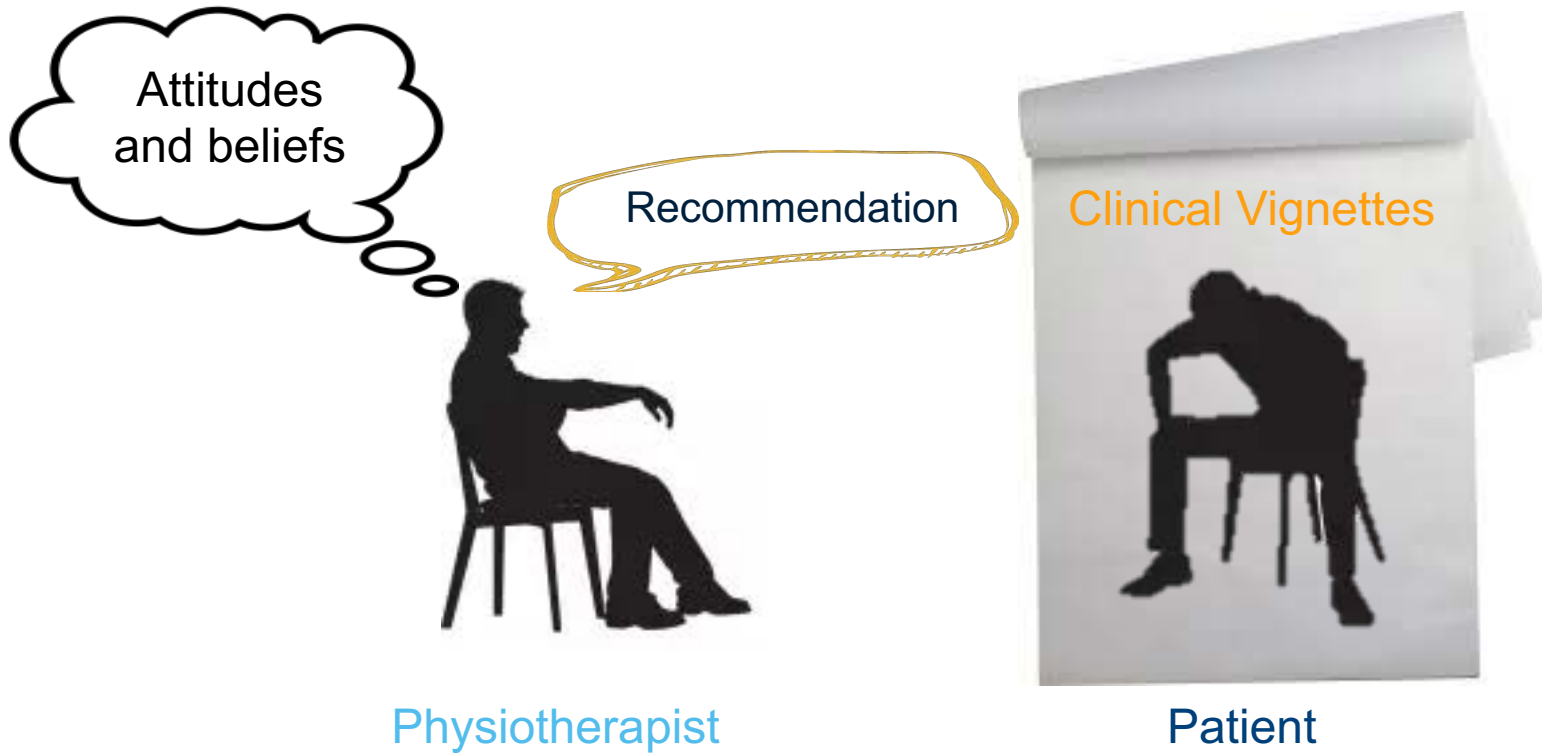
- Similarities to psychotherapy
 - Importance of psychosocial risk factors
 - High prevalence of mental illness
- Different treatment are equally efficacious (Hoffmann, 2007; Henschke, 2010; Rubinstein, 2011; Yamato, 2015)
 - Methodological shortcoming
 - Patient heterogeneity
 - **Common factors model: dodo bird effect?**

Measuring Common Factors



(e.g. Ostelo, 2003; Bishop, 2008)

Measuring Common Factors



(e.g. Ostelo, 2003; Bishop, 2008)

Clinical Vignettes vs. Standardized Patients

Clinical Vignette

Code:

Fall 3:

Eine 42-jährige Sekretärin mit milden Rückenschmerzen stellt sich vor. Sie kennt diese Schmerzen seit 4 Jahren mit mehreren Verschlimmerungsphasen jedes Jahr. Sie war im letzten Monat wegen einer typischen Verschlechterung arbeitsunfähig. Sie beschreibt ihren Schmerz als konstant, mit zeitweiligen schneidenden, stechenden Schmerzen im mittleren Lendenbereich. Ihre Symptome nehmen zu. Die körperliche Untersuchung ergibt keine neurologischen Befunde. Bildgebende Untersuchungen zeigen keine Auffälligkeiten.

Aussage 3: Ich würde dieser Patientin raten, dass sie

1	2	3	4	5
keine seiner Aktivitäten einschränkt	nur schmerzhafte Aktivitäten vermeidet	seine Aktivitäten auf moderate Belastung beschränkt	seine Aktivitäten auf leichte Belastung beschränkt	alle körperlichen Aktivitäten einschränkt

Standardized Patients (SPs)

Standardized performances of simulated patients



23 performances, based on vignette #3

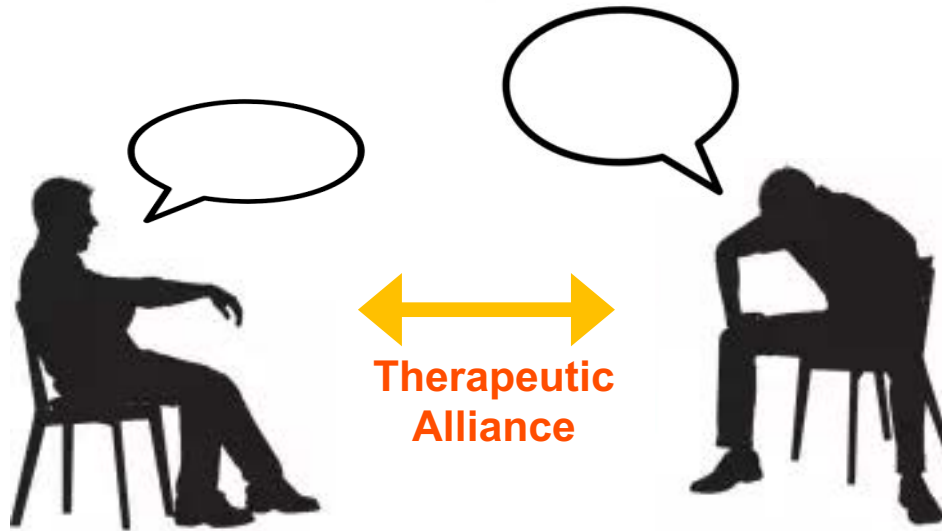
(high psychosocial risk factors)

Results

- 5 false-negative reports → they were real patients!
- 50% of SPs were detected by physiotherapists
- **Poor agreement** between the two measures, for both activity and work recommendation.
 - Kw: 0.29 (CI: -0.16 to 0.74) resp. Kw: -0.21 (CI: -0.61 to 0.19)

(Brunner, 2015)

Measuring Common Factors



Physiotherapist

Patient

Therapeutic Alliance

- Therapeutic relationship between the therapist and the patient. (Bordin, 1979)
- Predictor for treatment outcomes in patients with chronic low back pain. (Ferreira, 2013; Fuentes, 2016)

What makes a strong therapeutic alliance?

Measuring Common Factors



Psychosocial skills

Characteristics



Physiotherapist

Therapeutic Alliance



Psychosocial factors

Characteristics



Patient

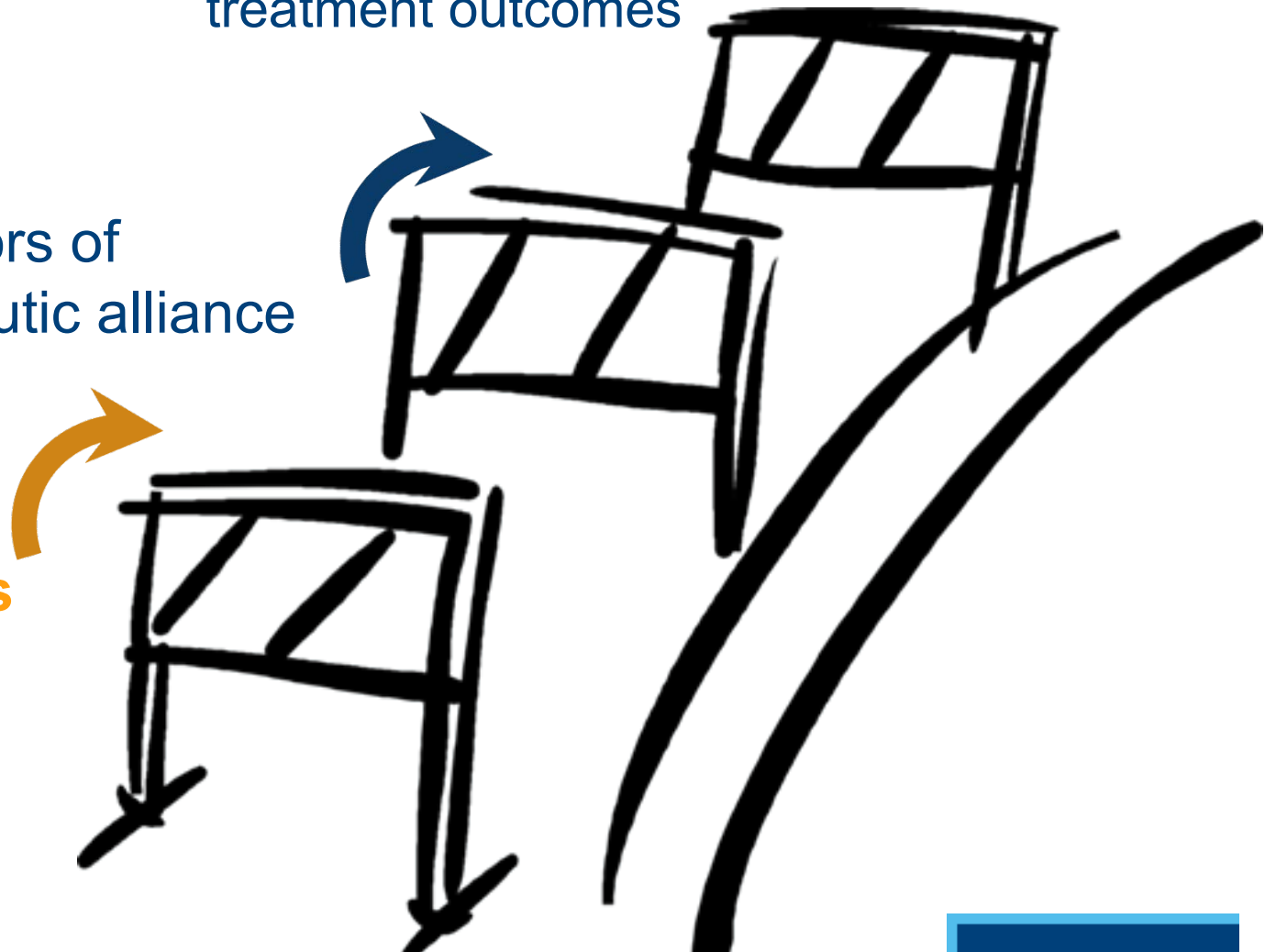
Common factors perspective in physiotherapy

- Treatment models and concepts may not fully explain how and why patient change in therapy.
- Exploring the role of the therapist in the treatment of NSCLBP.
- Research on common factors may help to better understand therapeutic change in physiotherapy.

Predictors of
treatment outcomes

Predictors of
therapeutic alliance

Measurements



Thank you!