

# Chronic pain management: Evidence for CBT

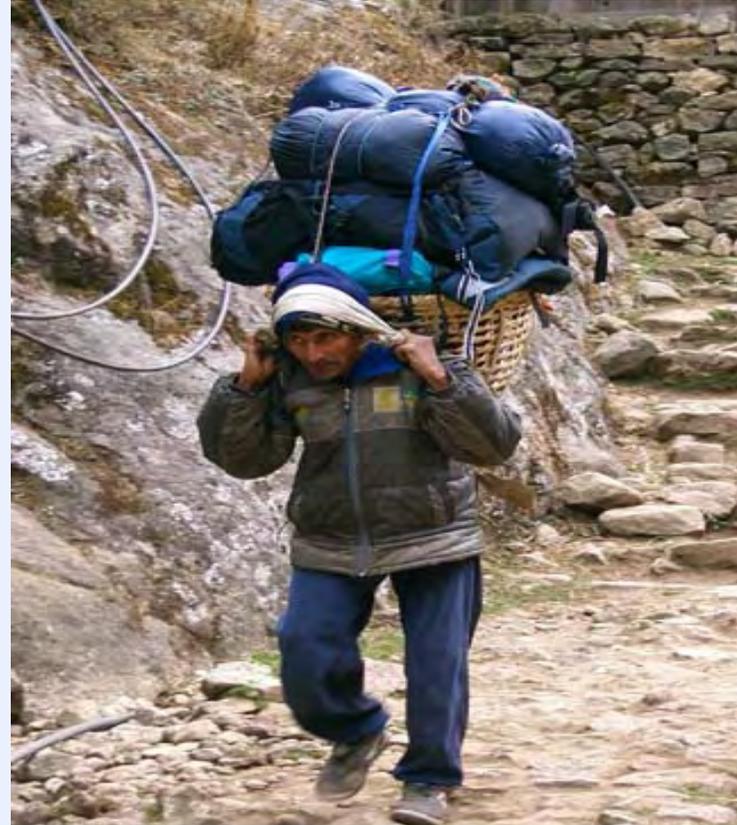
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In the Himalayas, Sherpas carry back packs, 90-100% of their body weight, over mountains 1000s of feet high, from dawn to dusk for days. How do they do it?



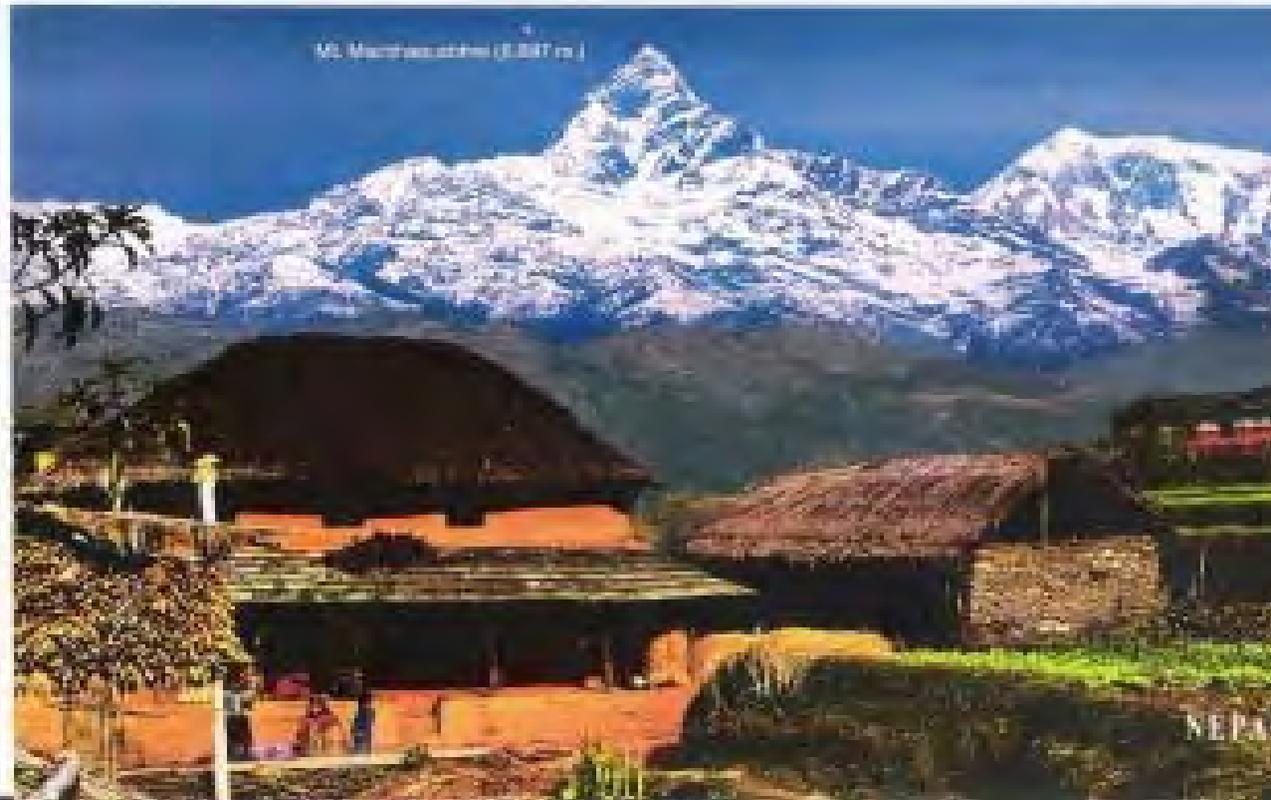
By pacing - taking regular breaks in climbing: Science, 2005

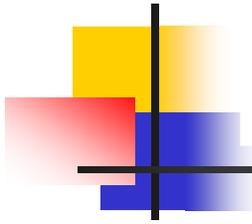
## Postcard from chronic pain patient

*“We have been trekking in the Annapurna region (in Nepal)  
- proof (if you needed more) that your treatments work!!!”*

How did she do it?

A regular (stable) dose of  
MS Contin and  
pain self-management  
strategies,  
including pacing  
- just like the Sherpas.

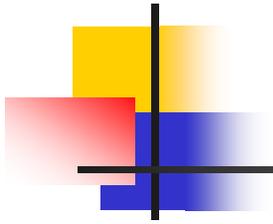




# Challenge of confronting chronic pain similar to confronting a mountain

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- Physical demand on mind and body
- Unrelenting (few short cuts)
- But variable (ups and downs)
- Self-reliance is critical

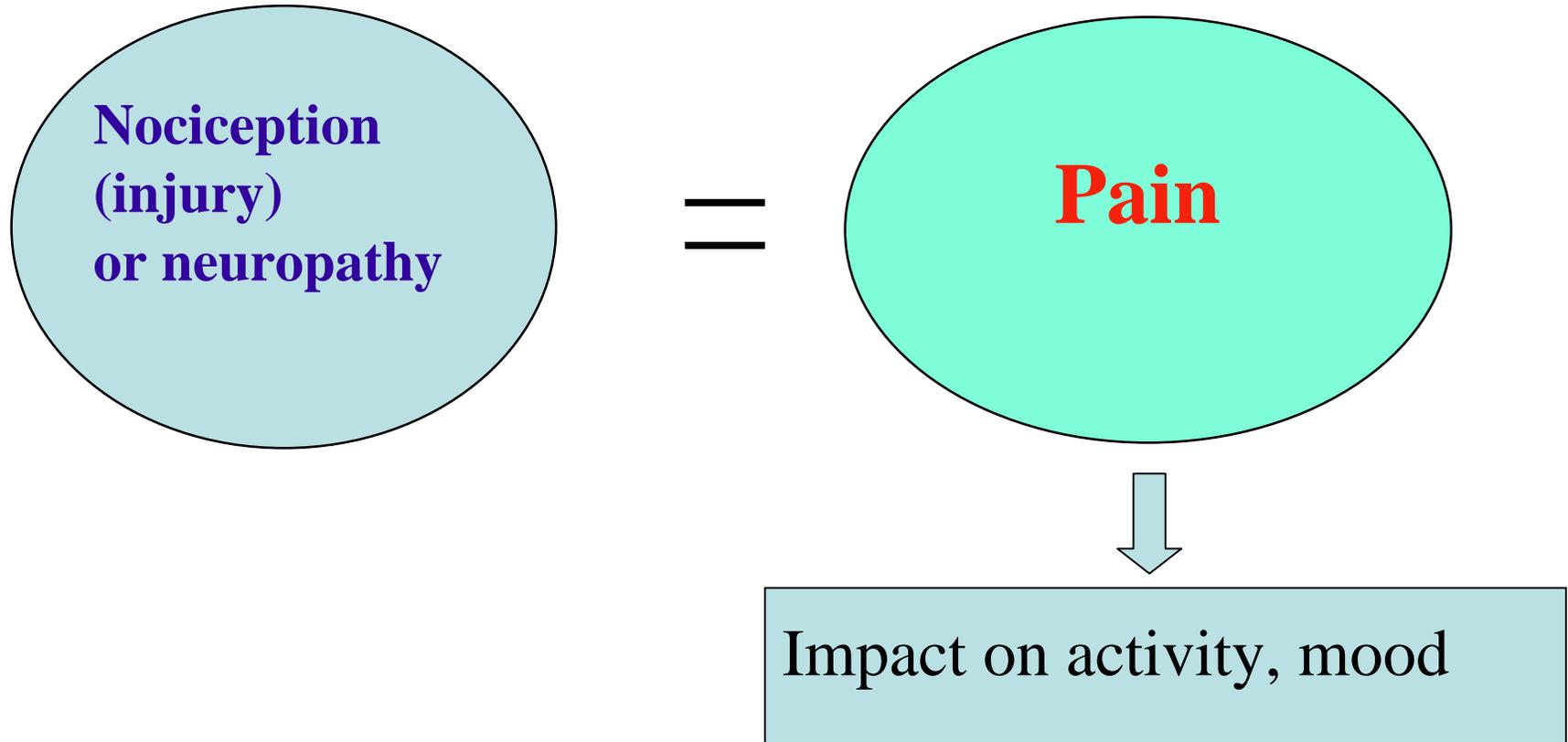


# The problem of chronic pain - Epidemiology

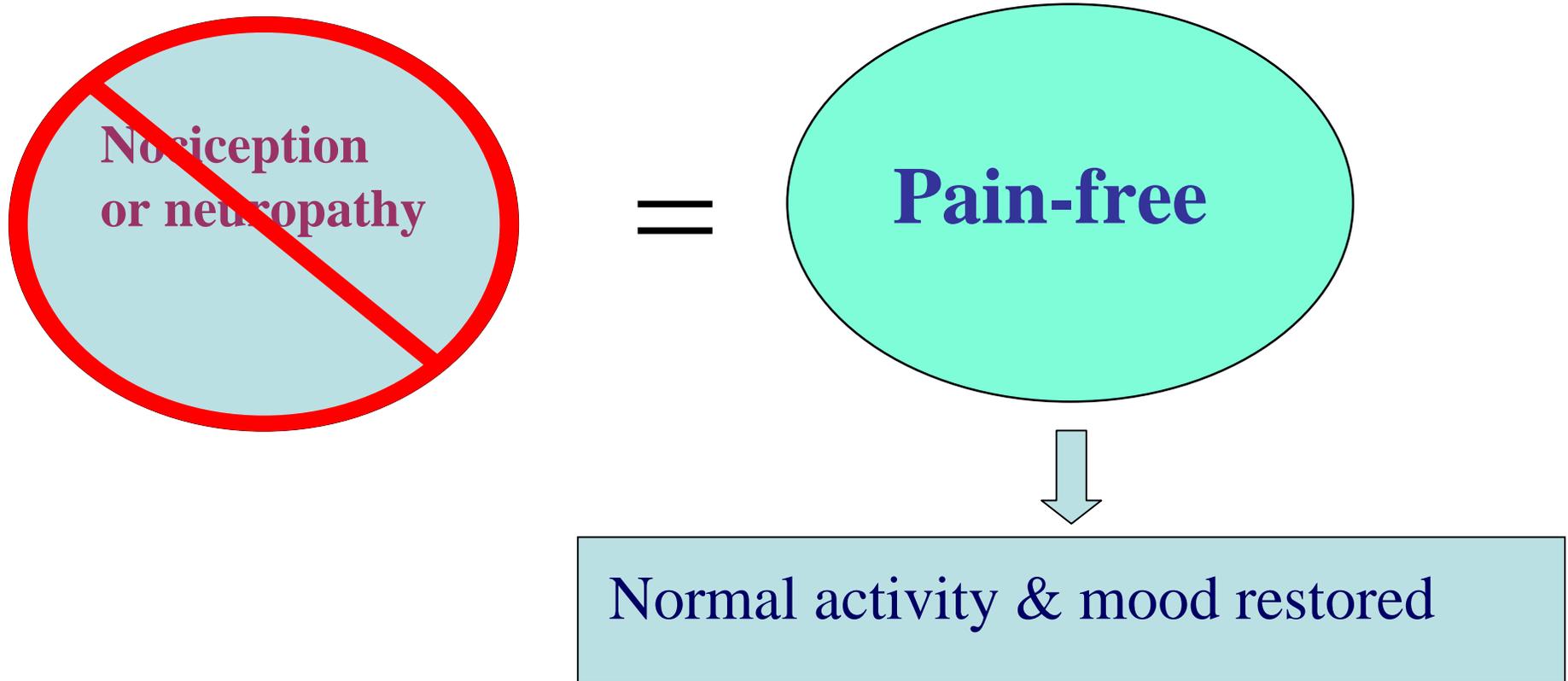
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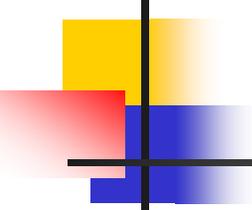
- Blyth et al. (2001) **Pain**, 89, 127-134.
- 17,000 interviewed (across NSW, Australia)
- Chronic pain (>3/12) prevalence (NSW):
  - 17.1% Males
  - 20.1% Females
- Interference in activities: reported by ~ 60% of cases

# “Traditional” Bio-medical model of pain



# Treatment implications?

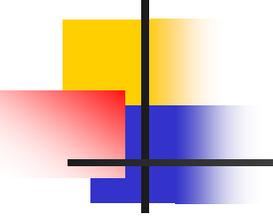




# This model works...

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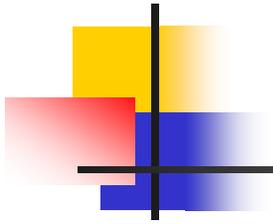
- (Usually) in acute pain states
- (Usually) in some chronic pain cases with orthopaedic procedures (eg. hip replacements)
- **But not always: Compensation status is associated with poor outcome after surgery** (Meta-analysis by Harris et al.. JAMA, April 6, 2005; 293: 1644-52).
- (Temporarily) in some (highly selected) chronic cervical and low back pain cases
- But for the rest? **(On average about 30% reduction in pain)**  
See Turk DC. Clinical effectiveness and cost-effectiveness of treatments for patients with chronic pain. *Clin J Pain* 2002b; 18: 355-65).



Moulin, et al. *The Lancet* 1996; 347.

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- Randomised, double blind, placebo-controlled, cross-over design (slow release morphine, up to 60mg bd)
- n = 46, patients with chronic non-cancer pain attending a pain clinic (excluded neuropathic pain)
- Results: “no significant differences or changes from baseline measures”
- **Authors: “9 weeks of oral morphine in doses up to 120mg daily may be of analgesic benefit, but is unlikely to confer psychological or functional benefit”**



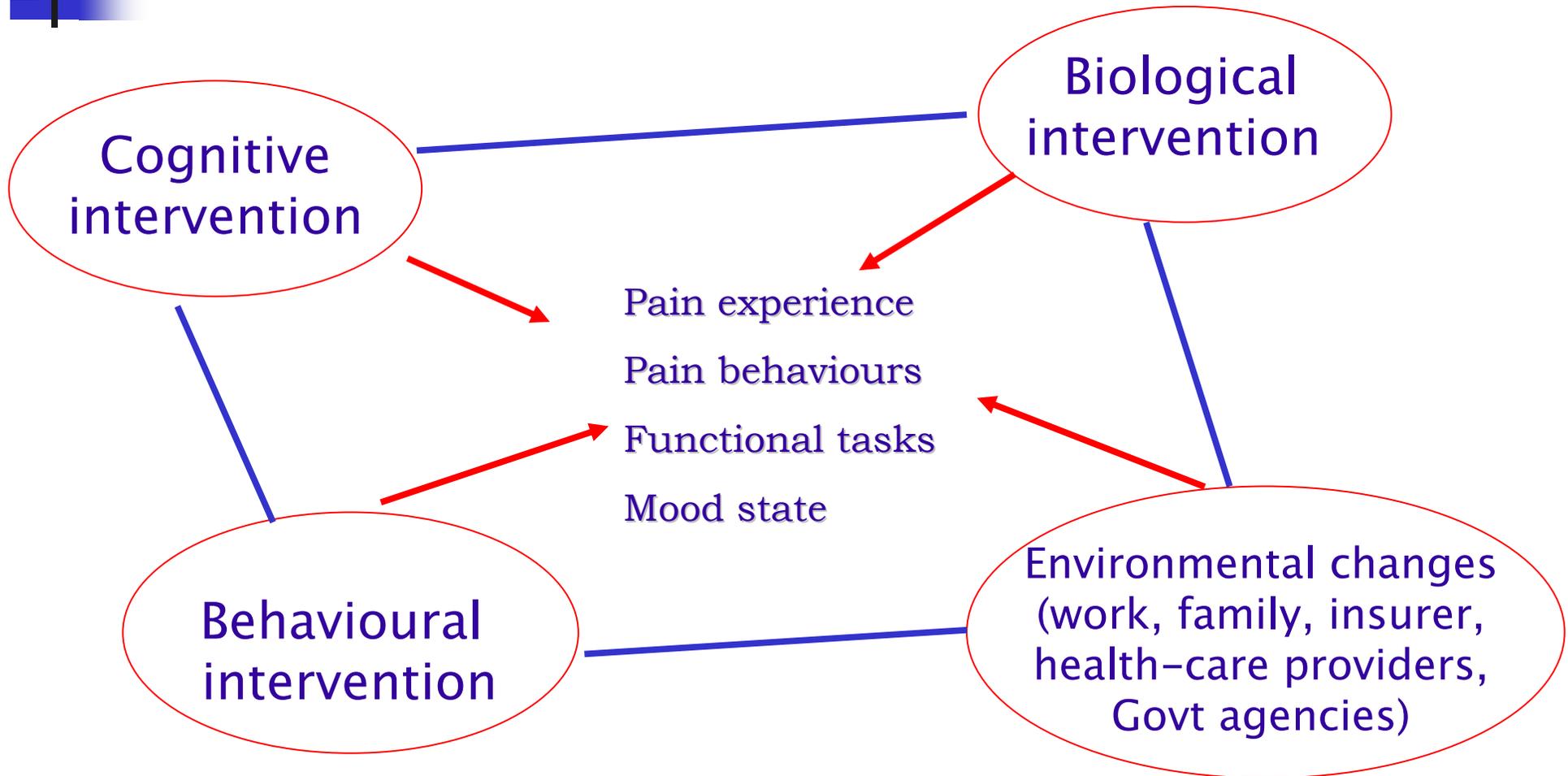
If pain relief not realistic, what outcomes are appropriate?

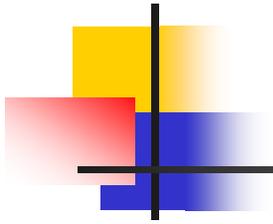
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## Main Goals of CBT:

- Increased functional activities, despite pain
- Improved mood, despite pain
- Reduced use of analgesic treatments

# Basic CBT pain management model



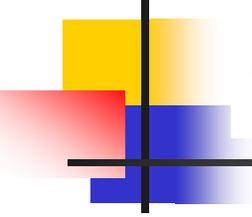


## Requires the patient to play an active role

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Von Korff et al. (1997) *Ann Int Med*, 127, 1097-1102

- “Medical care for chronic illness is rarely effective in the absence of adequate self-care (by patient)”.
- **Collaborative care** = patients + providers : shared goals, sustained working relationship, mutual understanding of roles/responsibilities, requisite skills for carrying them out.



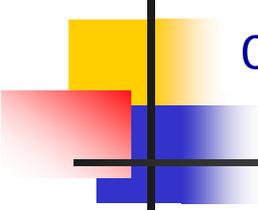
# CBT with chronic pain

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Support from systematic reviews and meta-analyses of randomized and non-randomized studies

- Flor et al., (1993) (heterogeneous chronic pain)
- McQuay et al., (1997) (heterogeneous chronic pain) Morley et al., (1999) (heterogeneous chronic pain- no headache studies)
- Van Tulder et al. (2000) (Chronic low back pain)
- Linton (2000) (Chronic low back pain)
- Guzman et al. (2001) (Chronic low back pain)
- Nielson & Weir Clin J Pain (2001)
- Koes et al. BMJ (2006) (Low back pain)
  
- Airaksinen et al., (2006) Eur Spine J; 15 (Suppl. 2): S192–S300:

“CBT may be one treatment of choice” for chronic LBP



## ‘Dose-response’ relationship for CBT and sub-acute and chronic pain (with severity of problem)

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Nicholas et al., 1992 [Mod disab: 10-sessions over 5-wks > exercises]

Williams et al., 1996 [Mod-severe disab. 4-wk inpt > 8, 3hr sessions > GP]

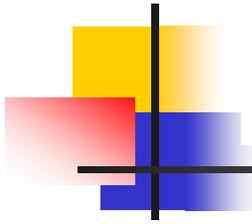
Linton and Anderssen, 2000 [mild disab. 6, 2hr sessions > standard rehab]

Marhold and Linton, 2001 [6, 2hr sessions: mild disab > mod disab.]

Guzman et al., 2002 (systematic review) [more intensive programs > less intensive, with mod-severe disab. Pts]

Haldorsen et al., 2002 [minimal disab: All tmts effective; mild disab: Ex/act approach = intensive prog. > GP; mod-sev. disab: Intensive prog > Ex/act, GP]

**\* More disabled chronic pain patients need more intensive CBT.**



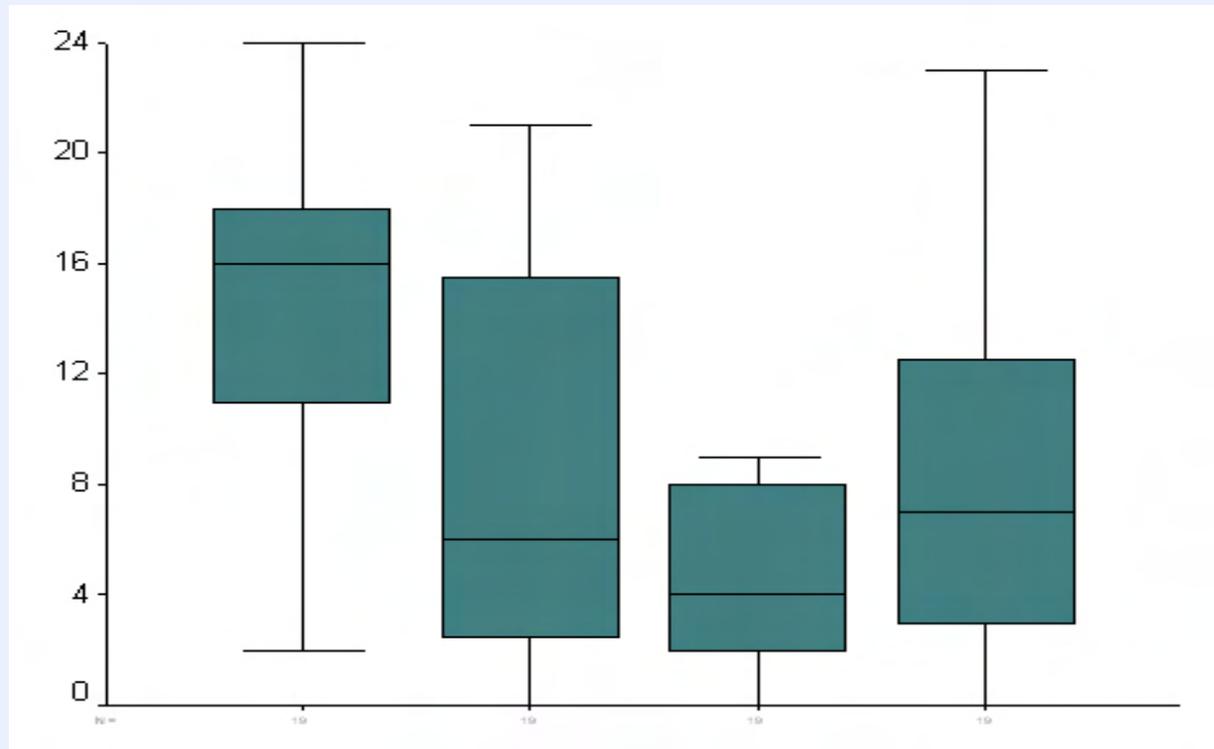
# Uncontrolled trial in Malaysia

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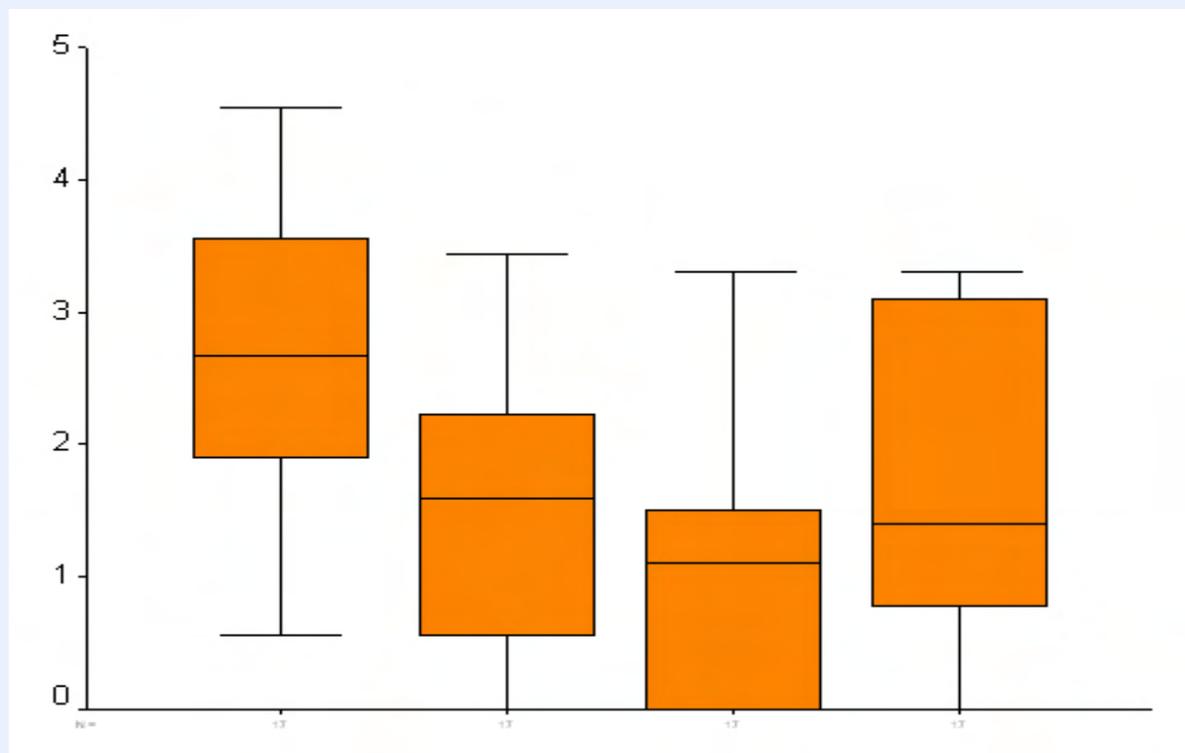
- 2-week, multi-disciplinary CBT program
- Patients from a range of ethnic backgrounds (Malay, Chinese, Indian)

(Nicholas, Cordosa, Chen. IASP, 2006)

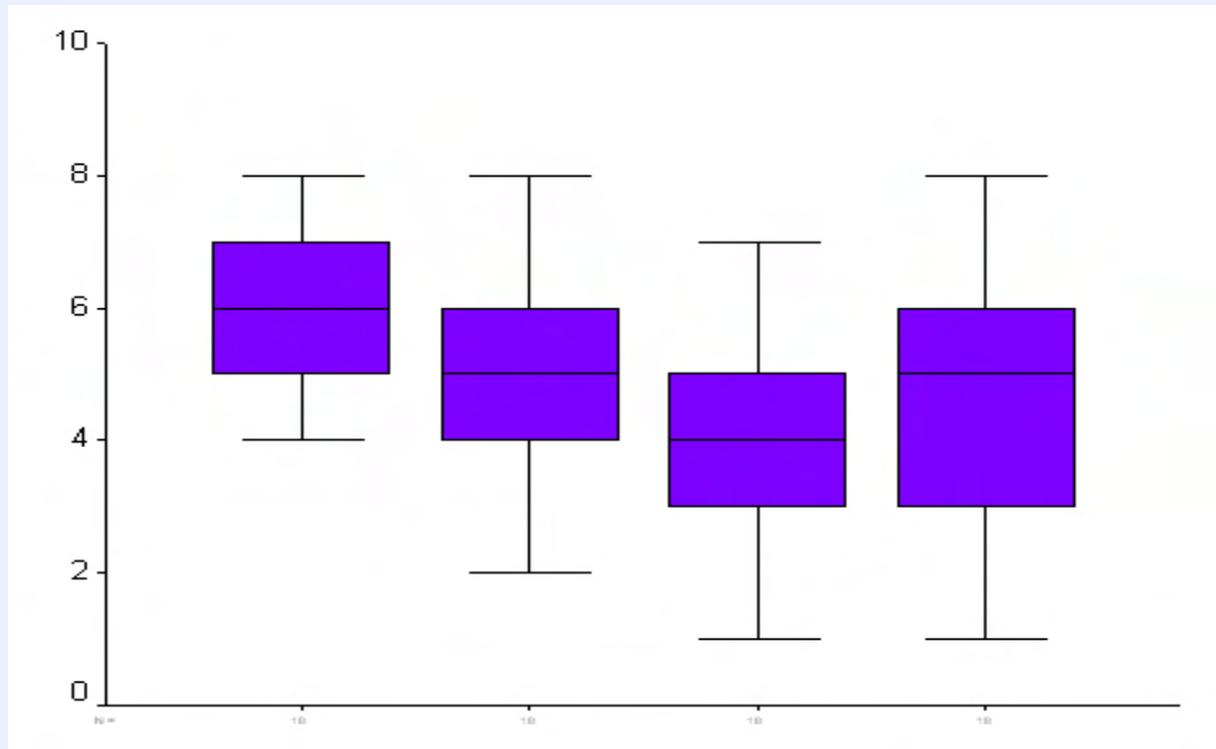
# Change in disability (Roland-Morris scale) [pre/post/1-mth/1-yr]



# Change in catastrophic thinking about pain

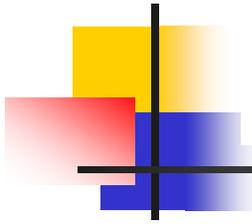


# Change in pain severity



# Hong Kong (Chen et al., 2005)

Work status	Baseline	6 month after COPE	12 month after COPE
Full-time job	7.4%	14.8%	22.2%
Looking for employment	3.7%	14.8%	11.1%
Not working in any capacity	70.4%	33.4%	33.4%

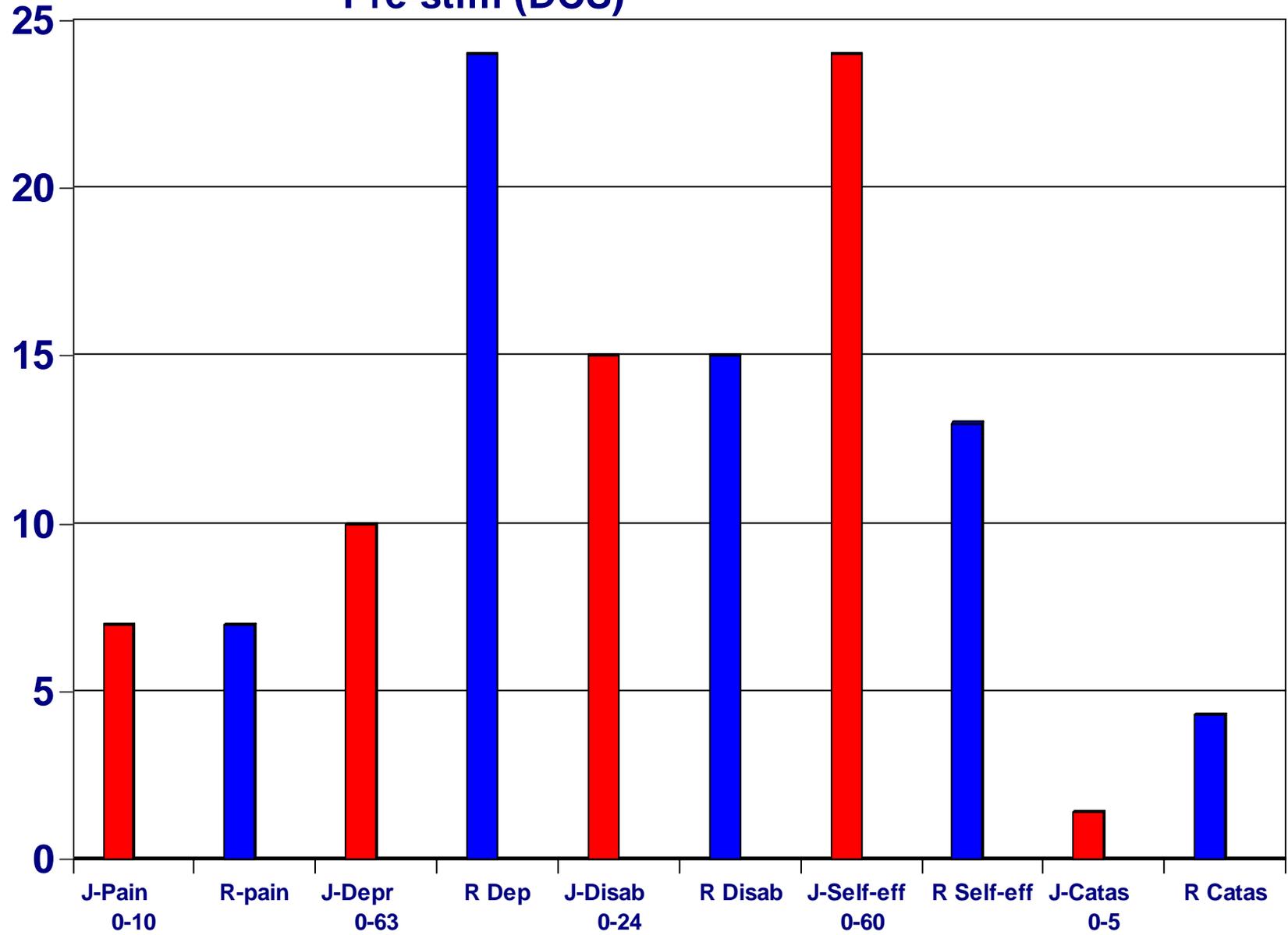


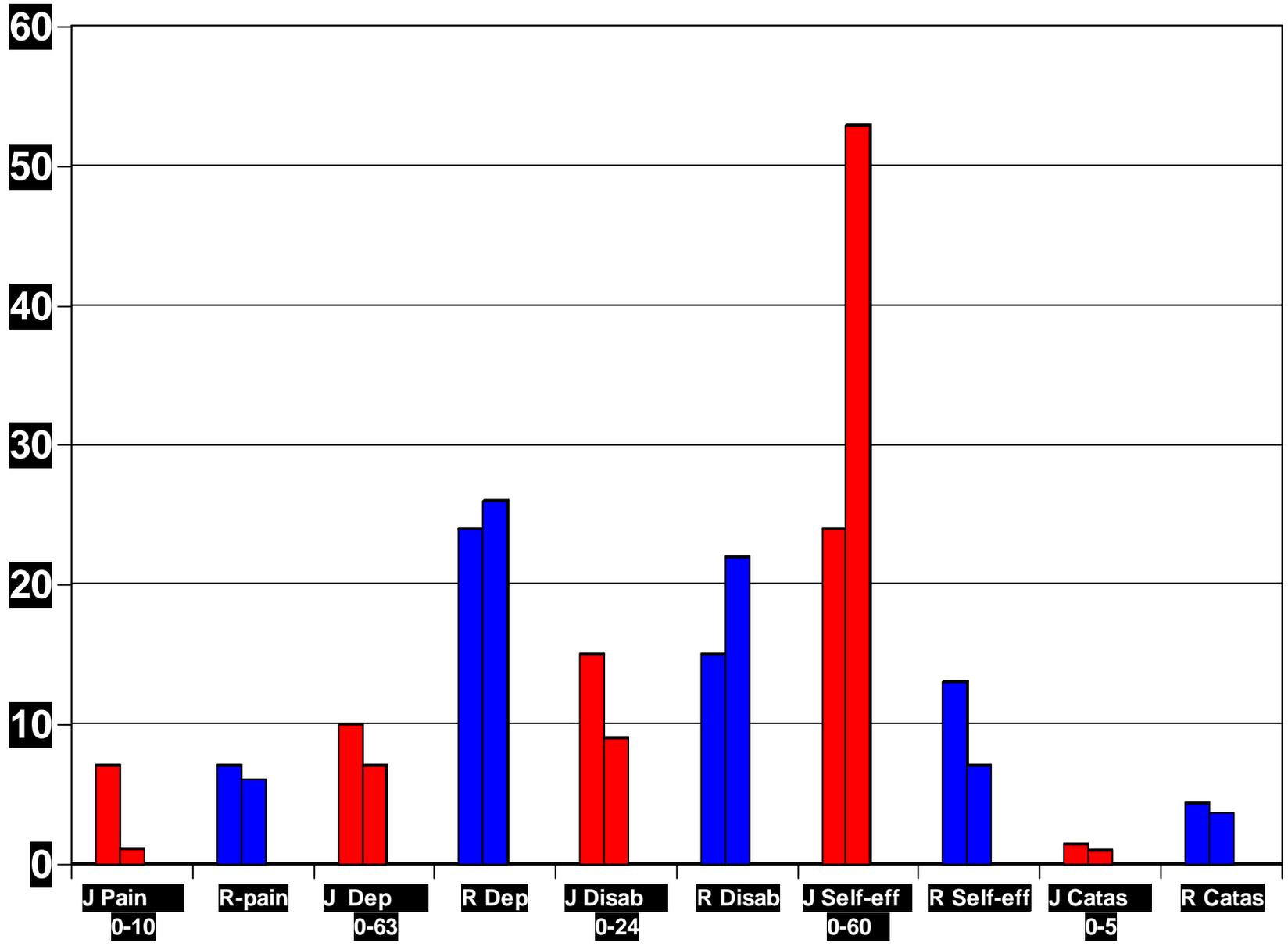
# Two illustrative cases

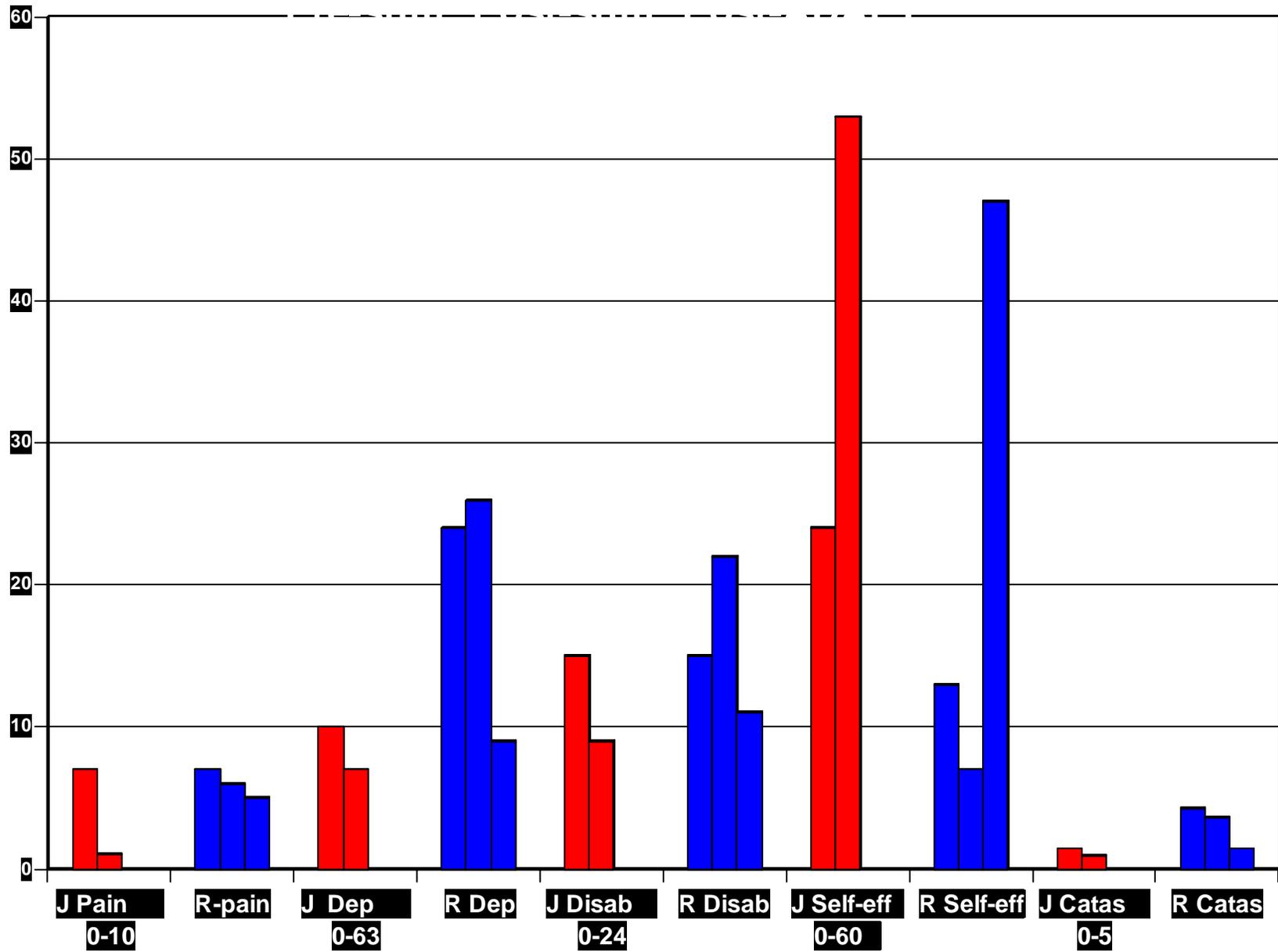
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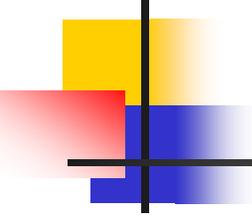
- R: male, 52 yrs, failed back surgery. Persisting low back and leg pain.
- J: female, 47 yrs, failed back surgery. Persisting low back and leg pain.

# Pre-stim (DCS)





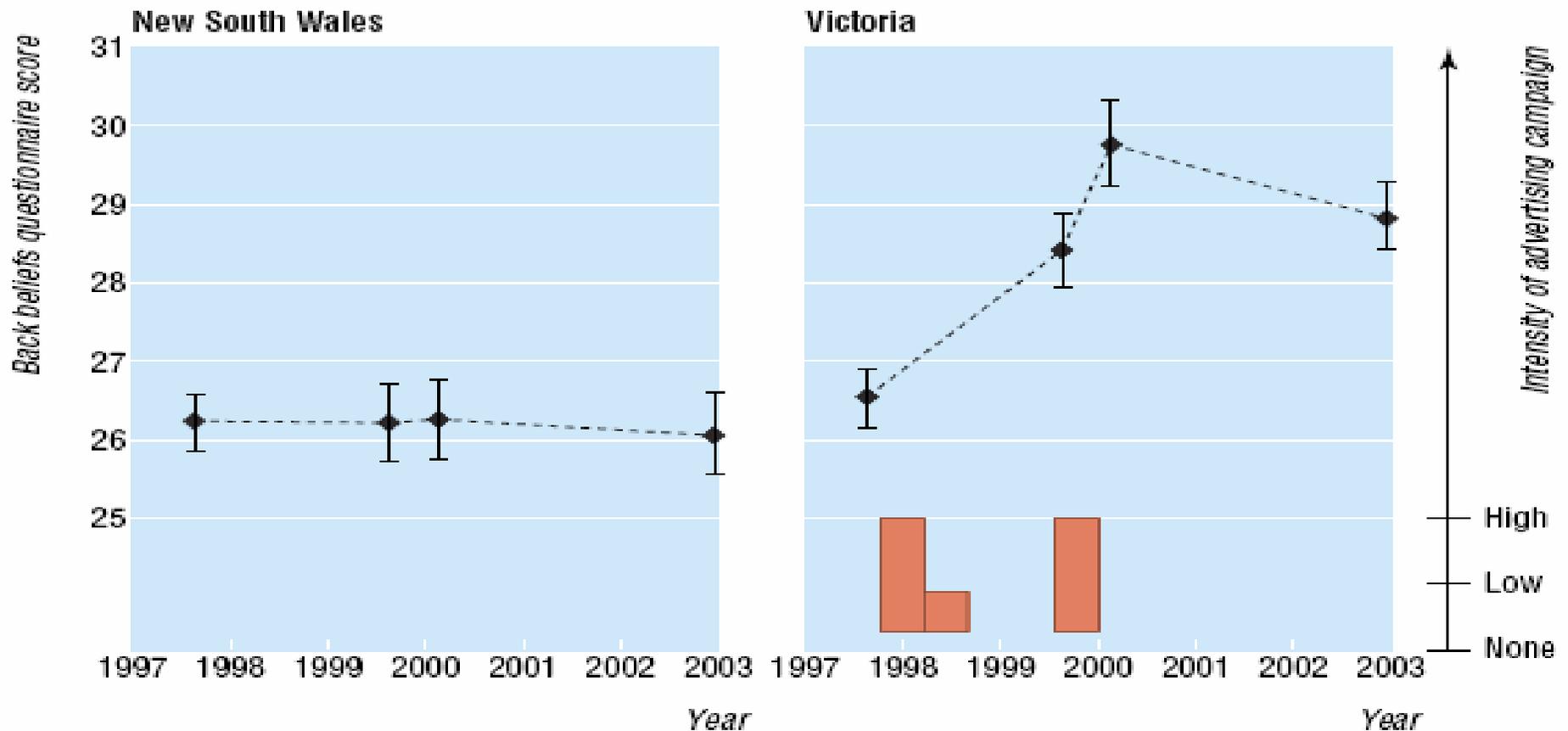




# Community intervention

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- **Australia** (Buchbinder et al. *Spine* 2001;26:2535–2542)
- Population-based, state-wide public health intervention to alter beliefs about back pain and its medical management.
- N = 4730 interviewed 2.5 yrs apart; 2556 GPs interviewed 2 yrs apart. 1 state (Victoria) = intervention, another state (NSW) = control

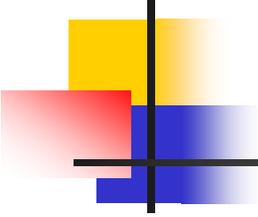


Mean score from the back pain beliefs questionnaire for New South Wales and Victoria for survey in August 1997, August 1999, February 2000, and December 2002 after media campaign ending in 1999. Error bars show 95% confidence interval. Bar chart shows media campaign (September 1997 to December 1999) with intensity indicated by height of bars

# General Practitioners' behaviour

- Derived from responses to a case study with sub-acute LBP presented by Buchbinder et al.

Response	Vic vs NSW*
No tests ordered	More likely <b>not</b> to order tests
Prescription of bed rest	Less likely to support bed rest
Advice on exercise	More likely to support exercise
Advice on work modification	More likely to advise change



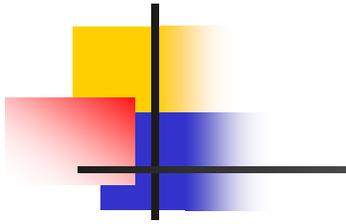
# Findings

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- If you get back pain in NSW you are operating in a different medical environment to Victoria
- Your treatment (and outcome) is likely to be different

## **Indeed, it was:**

- In Victoria: Decline in claims for back pain, rates of days off, and costs of medical management.
- In NSW: No change



# To conclude

- Beliefs, fears, coping responses and environmental factors influence disability and distress in patients with persisting pain
- Good evidence if these issues are addressed, disability and distress can be greatly reduced
- CBT intervention at individual level, group level and society
- Productive and satisfying lives are possible despite persisting pain
- Best results likely with **collaborative care** - all involved must comply with and support biopsychosocial principles (patient, doctor, physiotherapist, family, workplace, community).