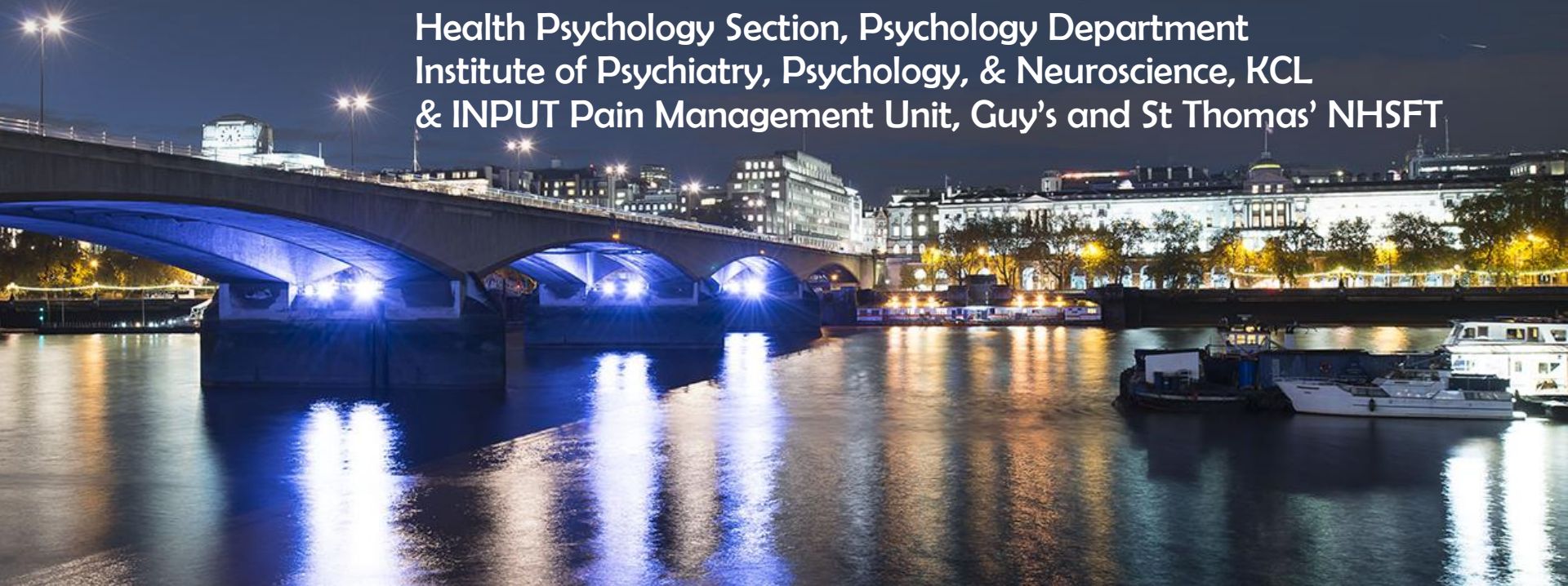


# Innovations in the Application of Psychological Models and Methods to Chronic Pain

Professor Lance M. McCracken

Health Psychology Section, Psychology Department  
Institute of Psychiatry, Psychology, & Neuroscience, KCL  
& INPUT Pain Management Unit, Guy's and St Thomas' NHSFT



# Summary

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- INPUT Pain Management opened 11 May 1989.
- Since that time it has been at for forefront of clinical research into interdisciplinary pain management.
- Recent ideas, approaches, and results from our research follow.

# INPUT Services

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- Assessment of people with complex chronic pain problems
- Treatments provided by teams of psychologists, physiotherapists, occupational therapists, nurses, and physicians:
  - Three-week residential group
  - Five session outpatient group
  - Two-week pre-neuromodulation
  - One-to-one psychology
  - Online (nearly ready for delivery)

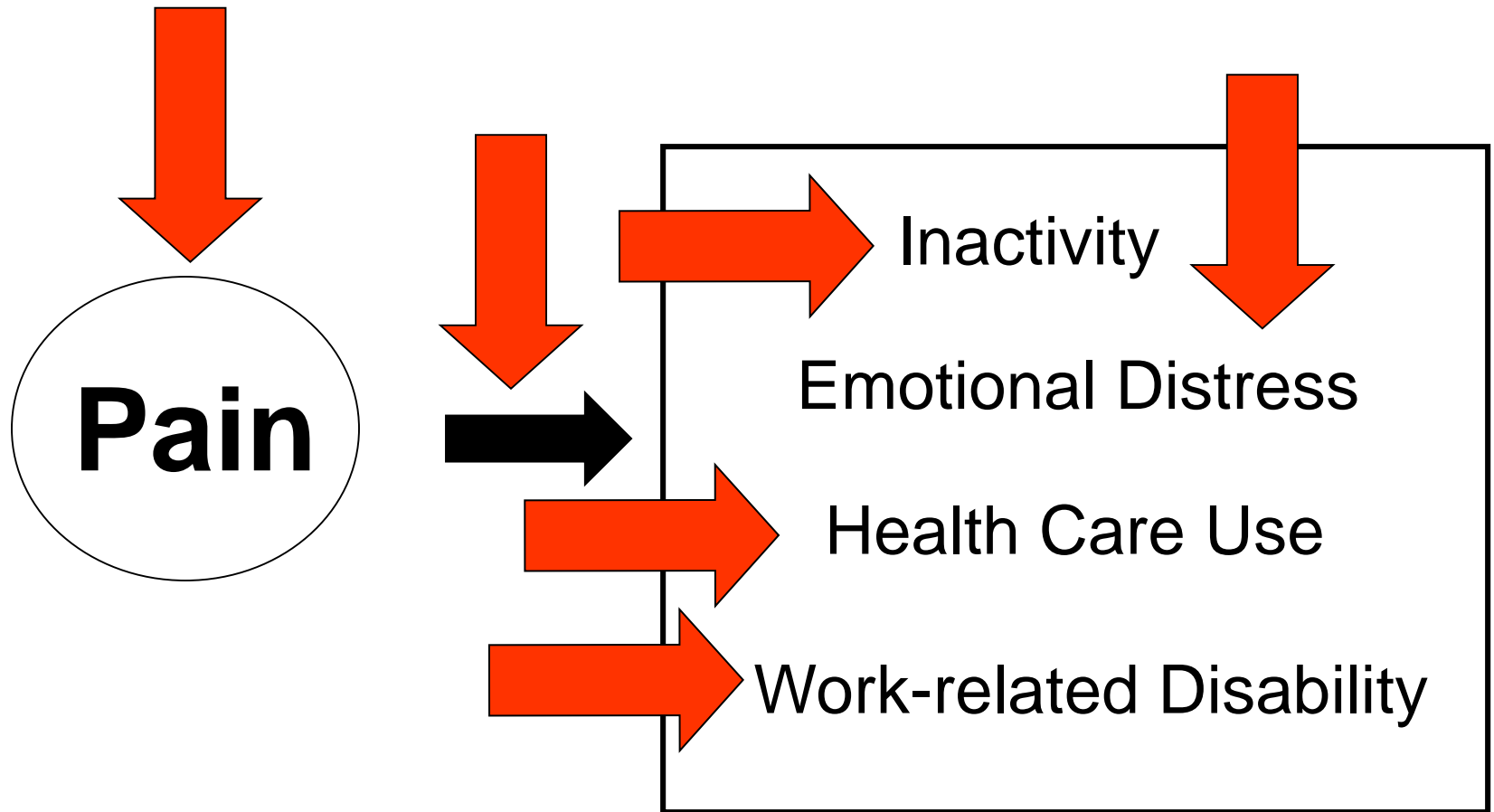
# Why Look at Behavioral, Psychological, and Social Issues?



# Why Look at Behavioral, Psychological, and Social Issues?



# Why Look at Behavioral, Psychological, and Social Issues?



# Psychological therapies for the management of chronic pain (excluding headache) in adults (Review)

Williams ACDC, Eccleston C, Morley S



This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library*  
2012, Issue 11

<http://www.thecochranelibrary.com>



# Relief on the inside Life on the outside

## A first-line prescription therapy for adults

- **NEW!** Powerful pain relief in Acute Pain and Primary Dysmenorrhea
- Powerful pain relief in OA and RA
- Real-life improvement in functional status as measured by WOMAC\* in OA patients and APS† Measure in patients with postoperative acute pain<sup>1,2</sup>

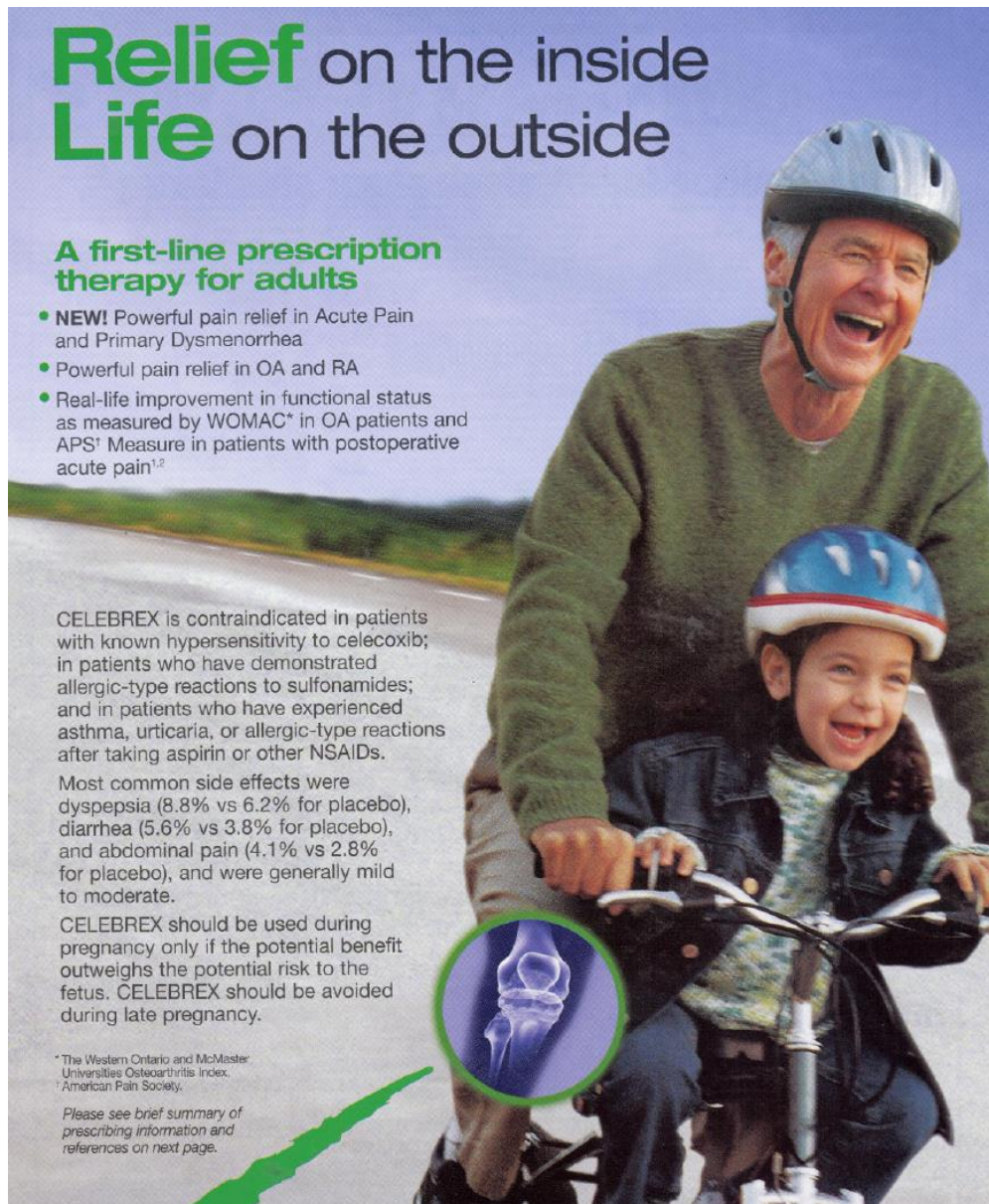
CELEBREX is contraindicated in patients with known hypersensitivity to celecoxib; in patients who have demonstrated allergic-type reactions to sulfonamides; and in patients who have experienced asthma, urticaria, or allergic-type reactions after taking aspirin or other NSAIDs.

Most common side effects were dyspepsia (8.8% vs 6.2% for placebo), diarrhea (5.6% vs 3.8% for placebo), and abdominal pain (4.1% vs 2.8% for placebo), and were generally mild to moderate.

CELEBREX should be used during pregnancy only if the potential benefit outweighs the potential risk to the fetus. CELEBREX should be avoided during late pregnancy.

\*The Western Ontario and McMaster Universities Osteoarthritis Index.  
† American Pain Society.

Please see brief summary of prescribing information and references on next page.





Research Article

# Positive Self-Statements

## Power for Some, Peril for Others

Joanne V. Wood,<sup>1</sup> W.Q. Elaine Perunovic,<sup>2</sup> and John W. Lee<sup>1</sup>

<sup>1</sup>University of Waterloo and <sup>2</sup>University of New Brunswick

---

**ABSTRACT**—Positive self-statements are widely believed to boost mood and self-esteem, yet their effectiveness has not been demonstrated. We examined the contrary prediction that positive self-statements can be ineffective or even harmful. A survey study confirmed that people often use positive self-statements and believe them to be effective. Two experiments showed that among participants with low self-esteem, those who repeated a positive self-statement (“I’m a lovable person”) or who focused on how that statement was true felt worse than those who did not repeat the statement or who focused on how it was both true and not true. Among participants with high self-esteem, those who repeated the statement or focused on how it was true felt better than those who did not, but to a limited degree. Repeating positive self-statements may benefit certain people, but backfire for the very people who “need” them the most.

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(b) in studies in which confounds, such as therapist attention or demand characteristics, seem highly plausible but were not controlled. The true impact of positive self-statements, then, is unknown.

We propose that, contrary to popular belief, positive self-statements can be useless for some people, even though they may benefit others. They may even backfire, making some people feel worse rather than better. We base our predictions on research involving attitude change, self-comparison, and self-verification. According to the “latitudes of acceptance” idea (Sherif & Hovland, 1961), messages that espouse a position close to one’s own attitude are more persuasive than messages that espouse a position far from one’s own (Eagly & Chaiken, 1993). Messages that fall outside one’s latitude of acceptance are thought to meet resistance, and even to have the potential to backfire, leading one to hold one’s original position even more strongly (Zanna, 1993). Positive self-statements can be construed as messages that attempt to change attitudes—in this

## Do we need to challenge thoughts in cognitive behavior therapy?

Richard J. Longmore<sup>a,\*</sup>, Michael Worrell<sup>a,b</sup>

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Received 22 February 2006; received in revised form 31 July 2006; accepted 3 August 2006

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### Abstract

Cognitive behavior therapy (CBT) emphasizes the primacy of cognition in mediating psychological disorder. It aims to alleviate distress by modifying cognitive content and process, realigning thinking with reality. Recently, various authors have questioned the need for CBT therapists to use logico-rational strategies to directly challenge maladaptive thoughts. Hayes [Hayes, S.C. (2004). Acceptance and commitment therapy and the new behavior therapies. In S.C. Hayes, V.M. Follette, & M.M. Linehan (Eds.), *Mindfulness and acceptance: Expanding the cognitive behavioral tradition* (pp. 1–29). New York: Guilford] has identified three empirical anomalies in the research literature. Firstly, treatment component analyzes have failed to show that cognitive interventions provide significant added value to the therapy. Secondly, CBT treatments have been associated with a rapid symptomatic improvement prior to the introduction of specific cognitive interventions. Thirdly, there is a paucity of data that changes in cognitive mediators instigate symptomatic change. This paper critically reviews the empirical literature that addresses these significant challenges to CBT. A comprehensive review of component studies finds little evidence that specific cognitive interventions significantly increase the effectiveness of the therapy. Although evidence for the early rapid response phenomenon is lacking, there is little empirical support for the role of cognitive change as causal in the symptomatic improvements achieved in CBT. These findings are discussed with reference to the key question: Do we need to challenge thoughts in CBT?

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**Keywords:** Cognitive behavior therapy; Component analyzes; Rapid response; Cognitive mediation; Empirical findings

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# Authors' Conclusion

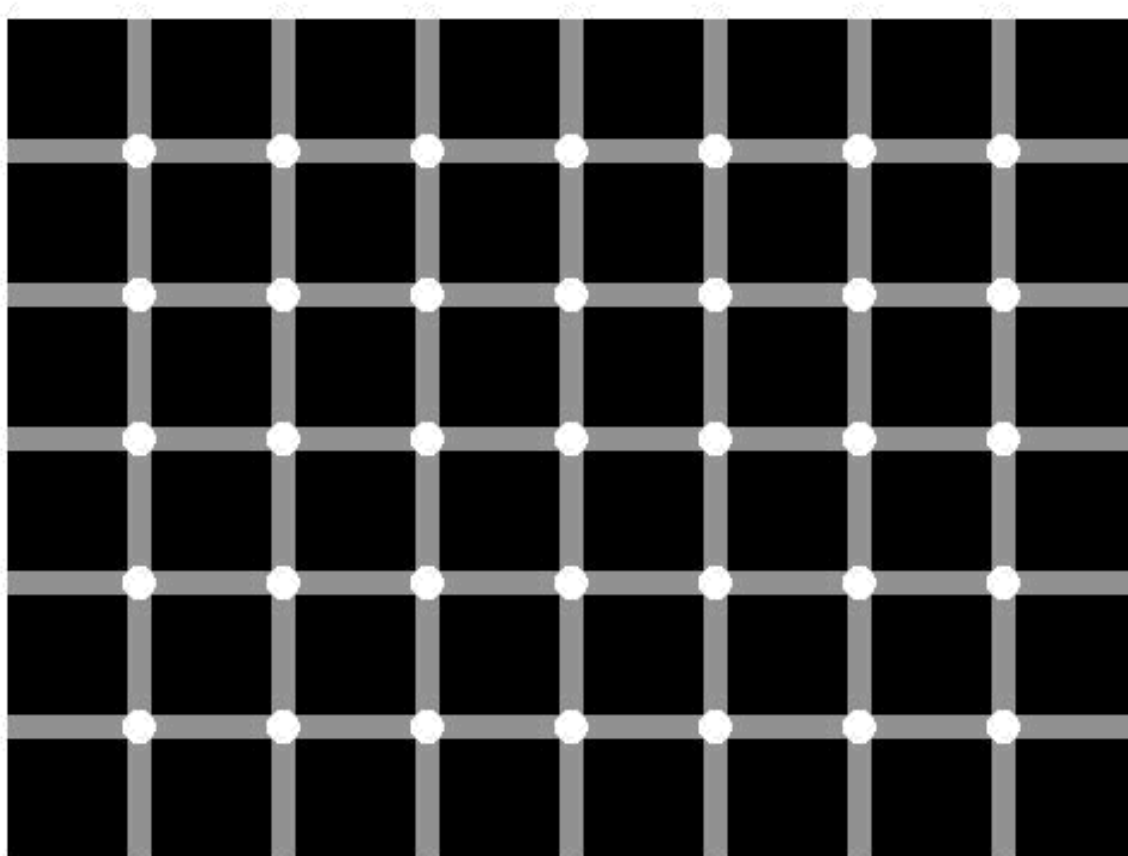
“...there is little empirical support for the role of cognitive change as causal in symptomatic improvements achieved in CBT.”



# We're Keen Problem-Solvers

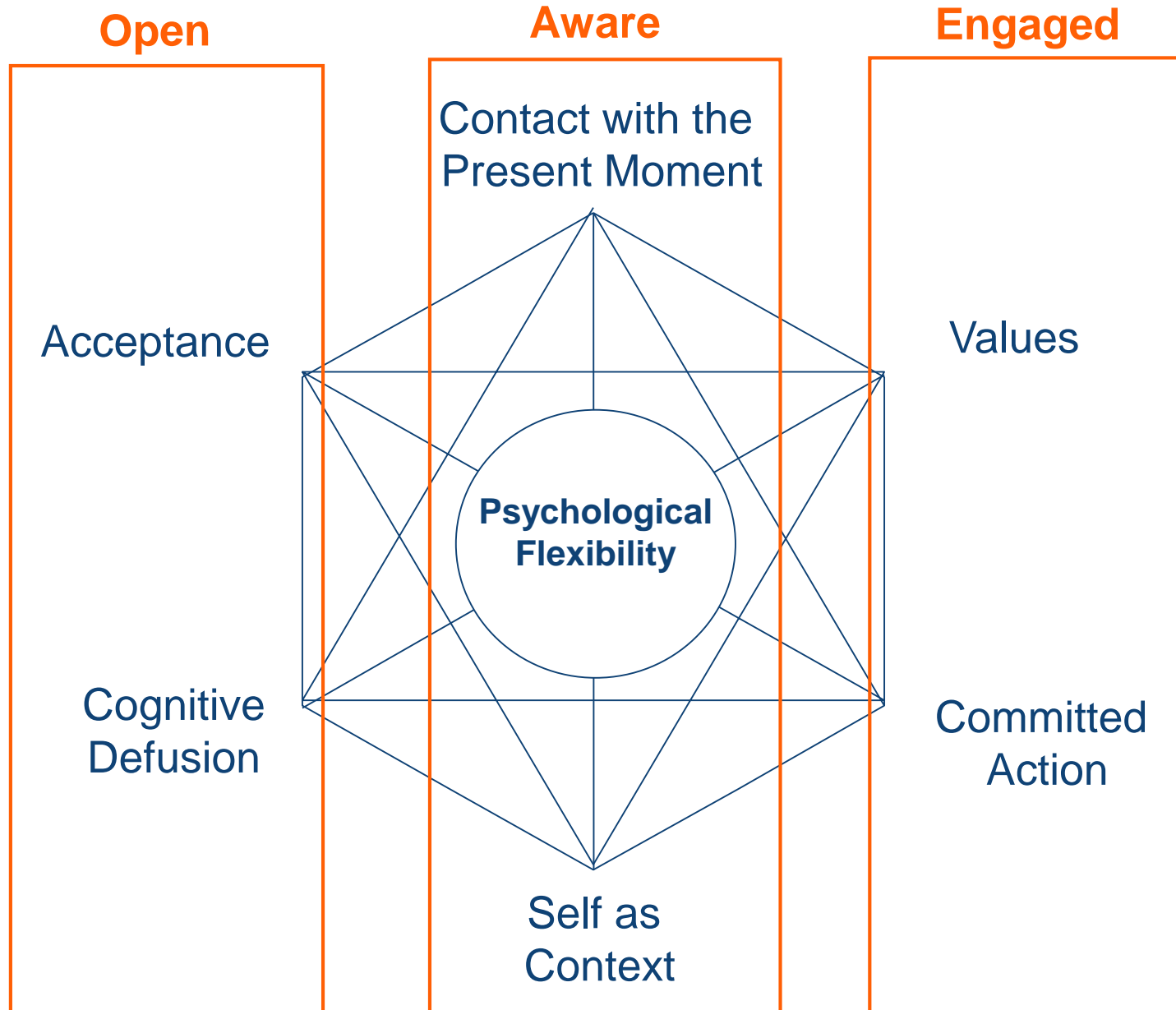


# Impossible Puzzle



[Count the black dots!]

# Dimensions of Psychological Flexibility





# Open Up





# Be Present



# Take Action



# INPUT Peer-Reviewed Research 2016-2017

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# ACT for Chronic Pain (N = 21 Outcome Studies)

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- o Dahl et al. 2004
- o McCracken et al. 2005
- o McCracken et al. 2007
- o Vowles & McCracken, 2008
- o Wicksell et al. 2008
- o Vowles et al. 2009
- o Johnston et al. 2010
- o Wetherell et al. 2011
- o Thorsell et al. 2011
- o McCracken & Gutierrez-Martinez, 2011
- o McCracken & Jones, 2012
- o Alonso et al., 2013
- o Wicksell et al., 2013
- o Burhman et al., 2013
- o McCracken et al., 2013
- o Steiner & Bigati, 2013
- o Luciano et al., 2014
- o Vowles et al., 2014
- o Trompeter et al., 2014
- o Alonso-Fernandez et al., 2015
- o Kemani et al., 2016

**Green = RCT = 13**



# A systematic review of randomized controlled trials of Acceptance and Commitment Therapy for adults with chronic pain: Outcome domains, design quality, and efficacy



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## ABSTRACT

Acceptance and Commitment Therapy (ACT) is a form of Cognitive Behavioral Therapy that includes a specific therapeutic process, “psychological flexibility,” and focuses on behavior change rather than symptom reduction. One relatively well-developed research area includes ACT applied to chronic pain. The current systematic review examines outcome domains included as primary, secondary and process variables in controlled trials of ACT-based pain treatment studies, and also summarizes evidence for efficacy. The review of outcome domains is to establish whether these are in-line with recommendations, consistent with the theory underlying ACT, and optimal for further development. A systematic search identified 1034 articles and ten studies were selected as eligible for review. Overall, 15 outcome domains were assessed using 39 different measurement tools across the ten RCTs. The outcome domains assessed in the reviewed trials were, to an extent, in-line with recognized guidelines. Six of the ten studies identified primary and secondary outcomes; one included just one outcome and three did not categorize outcomes. All ten trials included a measure of some aspect of psychological flexibility; however these were not always formally identified as process variables. Pain and emotional functioning were the most frequently measured outcome domains. A review of outcome results suggests that ACT is efficacious particularly for enhancing general, mostly physical functioning, and for decreasing distress, in comparison to inactive treatment comparisons. It is recommended that future RCTs (a) formally define outcomes as primary, secondary and process variables, (b) consider including measures of physical or social functioning, rather than pain and emotional functioning, as primary outcomes, (c) address existing risks of bias, such as reporting bias, and (d) include more components of psychological flexibility, such as cognitive defusion and self-related variables.

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## PSYCHOLOGY, PSYCHIATRY & BRAIN NEUROSCIENCE SECTION

### *Brief Research Article*

## Can a Psychologically Based Treatment Help People to Live with Chronic Pain When They Are Seeking a Procedure to Reduce It?

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Stephany Harris, BA,<sup>†</sup> and Karen Sanderson, RGN<sup>†</sup>

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Conflict of interest: The authors report no conflict of  
interest in relation to this study. Whitney Scott is  
supported by a postdoctoral fellowship grant from the  
International Association for the Study of Pain.

### Abstract

clinically significant improvement on pain, depression, physical functioning, social functioning, and pain acceptance. Regression analyses indicated that change in pain acceptance related to improvements in depression, mental health, physical function, and social function. Results with regard to the trial of neuromodulation revealed that patients who did not proceed to the trial at their physician's request ( $n = 13$ ) reported significantly worse depression and mental health, and lower levels of pain acceptance and committed action following the 2-week program compared with those who went for the trial.

**Conclusion.** People seeking medical interventions to reduce pain appear able to benefit from an interdisciplinary treatment aimed to improve daily functioning and mental health through increased psychological flexibility.

**Key Words.** Cognitive Behavioral Therapy; Acceptance and Commitment Therapy; Chronic Pain; Neuromodulation; Spinal Cord Stimulation

# Example Method: Notice Five Things

1. Pause.
2. Look around and notice five objects you can see.
3. Listen carefully and notice five sounds you can hear.
4. Notice five things you can feel in and around your body.

From: Harris, R. (2008). The Happiness Trap. Boston: Trumpeter Books.



# Project Ideas for the Future

- Efficacy and effectiveness studies, including cost-effectiveness.
- Internet-based treatment.
- Research into assessment and selection for treatment procedures.
- Opioid reduction.

# Successful Treatment of Pain Depends on Behavior Change

Success occurs when the patient:

1. Says pain is improved.
2. Engages in meaningful life activities.
3. Uses health care resources at a prudent level.



It's all behavior!

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