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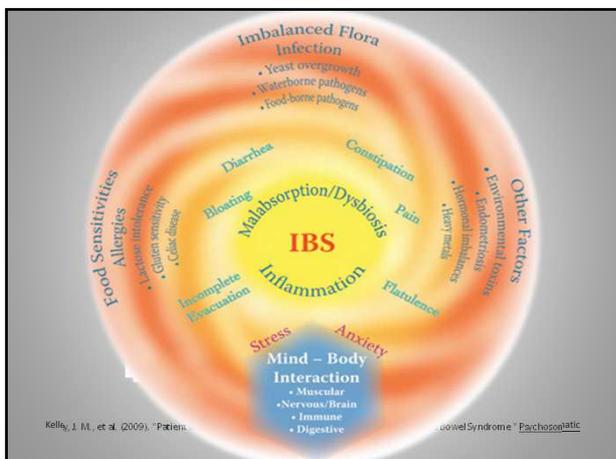
The Influence of the Patient-Clinician Relationship on Healthcare Outcomes: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

John M. Kelley^{1,2*}, Gordon Kraft-Todd¹, Lidia Schapira^{1,4}, Joe Kossovsky^{2,5,6}, Helen Riess¹

- 13 RCTs
- Random-effects-model
- “Small but significant effect on health outcomes” (p = 0.02)

Figure 3. Risk of Bias Assessment. doi:10.1371/journal.pone.0194207.g003

Kelley JM, Kraft-Todd G, Schapira L, et al. The Influence of the Patient-Clinician Relationship on Healthcare Outcomes: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. PLOS ONE 2014; 9(4):e94207.



Efficacy/effectiveness

acupuncture point specific effects	efficacy 1	efficacy 2	
physiological effects due to skin penetration	penetrating sham acupuncture	non penetrating sham acupuncture	effectiveness
patient-practitioner interaction			
practitioners' treatment beliefs/expectations			waiting list
patients' treatment beliefs/expectations			
study setting and statistical artefacts (regression to the mean)			



Components of the patients' benefit and aspects of efficacy and effectiveness n= 800 needed for efficacy study

Witt, C. (2011). "Clinical research on acupuncture — Concepts and guidance on efficacy and effectiveness research." *Chinese Journal of Integrative Medicine* 17(3): 166-172.
 Linde, K., K. Niemann, et al. (2010). "How large are the nonspecific effects of acupuncture? A meta-analysis of randomized controlled trials." *BMC Medicine* 8(1): 75.

Individual patient data meta-analysis

17 922 patients



Vickers A. CAMMAC, et al. Acupuncture for chronic pain: Individual patient data meta-analysis. *Archives of Internal Medicine* 2012;172(19):1444-53

Background

Although acupuncture is widely used for chronic pain, there remains considerable controversy as to its value. We aimed to determine the effect size of acupuncture for 4 chronic pain conditions: back and neck pain, osteoarthritis, chronic headache, and shoulder pain.

Methods

We conducted a systematic review to identify randomized controlled trials (RCTs) of acupuncture for chronic pain in which allocation concealment was determined unambiguously to be adequate. Individual patient data meta-analyses were conducted using data from 29 of 31 eligible RCTs, with a total of 17 922 patients analyzed.

Cure

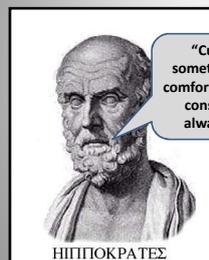
Effect size 1

Comfort

"Moderate effect"
 ES 0.5 - 0.8
 "Mild effect"
 ES 0.3 - 0.5

Consolation

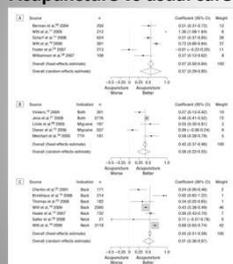
"Small effect"
 ES < 0.3



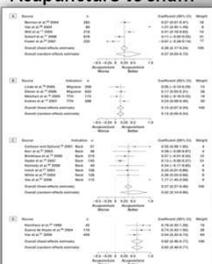
ΗΙΠΠΟΚΡΑΤΗΣ

Individual metaanalysis n=17922

Acupuncture vs usual care



Acupuncture vs sham



Vickers A. CAMMAC, et al. Acupuncture for chronic pain: Individual patient data meta-analysis. *Archives of Internal Medicine* 2012;172(19):1444-53

Individual metaanalysis n=17922

Acupuncture vs usual care

Acupuncture vs sham

Comfort Consolation

Vickers A. CAMMAC, et al. Acupuncture for chronic pain: Individual patient data meta-analysis. *Archives of Internal Medicine* 2012;172(19):1444-53

The **overall magnitude of the nocebo effect was moderate to large** (lowest $g = 0.62$ [0.24–1.01] and highest $g = 1.03$ [0.63–1.43]) and highly variable (range of $g = -0.43$ to 4.05). The magnitudes and range of effect sizes was similar to those of placebo effects ($d = 0.81$) in mechanistic studies. In studies in which nocebo effects were induced by a combination of verbal suggestions and conditioning, the effect size was larger (lowest $g = 0.76$ [0.39–1.14] and highest $g = 1.17$ [0.52–1.81]) than in studies in which nocebo effects were induced by verbal suggestions alone (lowest $g = 0.64$ [-0.25 to 1.53] and highest $g = 0.87$ [0.40–1.34]). **These findings are similar to those in the placebo literature. As the magnitude of the nocebo effect is variable and sometimes large, this meta-analysis demonstrates the importance of minimizing nocebo effects in clinical practice.**

Petersen, G. L., et al. (2014). "The magnitude of nocebo effects in pain: A meta-analysis." *PAIN* 155(8): 1426-1434.



James Bond "Never say never again"



James Bond "Never say never again"



James Bond "Never say never again"



