

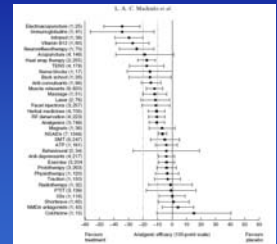
The therapeutic alliance between physiotherapists and patients predicts outcome in chronic low back pain

Paulo Ferreira, Manuela Ferreira, Christopher Maher, Kathryn Refshauge, Jane Latimer, Robert Herbert, Roger Adams



Rheumatology Advance Access published December 24, 2009  
 Rheumatology 2009; 8: 1-8  
 doi:10.1093/rheumatology/ken375  
**Analgesic effects of treatments for non-specific low back pain: a meta-analysis of placebo-controlled randomized trials**  
 L. A. C. Machado<sup>1</sup>, S. J. Kamper<sup>2</sup>, R. D. Herbert<sup>3</sup>, C. G. Maher<sup>3</sup> and J. H. McAuley<sup>2</sup>

the size dilemma is justifiable



the routes...



refine outcomes

identify subgroups

improve therapist-intervention



The therapeutic alliance

> alliance, interaction between patients and therapists. Degree of agreement in goals with therapy. Function to create a climate of trust and emotional bond!



1 - Duncan & Miller, 1999



aims

investigate whether the alliance between physiotherapists and patients predicts outcome or response to treatment in chronic low back patients



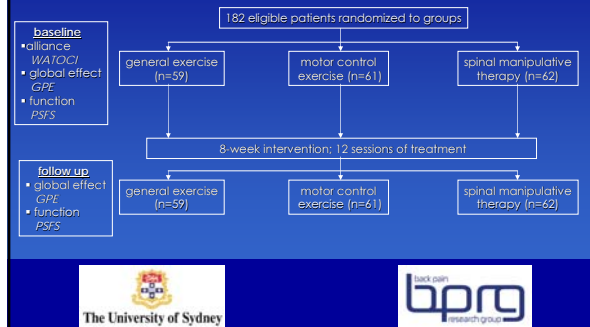
methods



**PAIN**  
 Pain xxx (2007) xxx-xxx  
 www.elsevier.com/locate/jpain  
**Comparison of general exercise, motor control exercise and spinal manipulative therapy for chronic low back pain: A randomized trial**  
 Manuela L. Ferreira<sup>a</sup>, Paulo H. Ferreira<sup>b</sup>, Jane Latimer<sup>c</sup>, Robert D. Herbert<sup>c</sup>, Paul W. Hodges<sup>d</sup>, Matthew D. Jennings<sup>e</sup>, Christopher G. Maher<sup>c,f</sup>, Kathryn M. Refshauge<sup>c</sup>



## methods



## interventions

- **General exercises<sup>1</sup>**
  - improve physical function and confidence with the spine
  - groups of 8
  - stretching, strengthening, cardiovascular...
- **Motor control exercises<sup>2</sup>**
  - restore optional control of the spine
  - local and global muscles
  - breathing, continence, neutral spine
- **Manual therapy<sup>3</sup>**
  - joint mobilization or manipulation

1- Moffett and Frost, 2000;  
2- Hodges, Ferreira, and Ferreira, 2007  
3- Maitland et al, 2001



## analysis

- statistician blind to group allocation
- intention to treat
- linear regression models

$$\text{Final GPE or PSFS} = \alpha + \beta_1 * \text{GPE or PSFS at baseline} + \beta_2 * \text{WAIOCI} + \beta_3 * \text{pair contrast (MC \& GE; MC \& SMT; GE \& SMT)} + \beta_4 * \text{interaction (pair contrast * WAIOCI)}$$



## results

### GPE – motor control & general exercises

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.941	2.545		-2.727	.007
	Global perceived effect at baseline	.091	.091	.082	.996	.322
	Working Alliance Inventory total score	.082	.025	.450	3.288	.001
	SSEvsGEWAL	-.069	.031	-1.522	-2.224	.028
	Contrast of SSE vs GE	8.913	3.136	1.933	2.842	.005



### GPE – motor control & SMT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.957	1.699		-2.918	.004
	Global perceived effect at baseline	.058	.078	.063	.740	.461
	Working Alliance Inventory total score	.075	.017	.527	4.385	.000
	Contrast of SSE vs SMT	6.799	2.389	1.717	2.846	.005
	SSEvsSMTWAL	-.062	.024	-1.572	-2.560	.012



### GPE – general exercises & SMT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.818	2.924		-2.332	.021
	Global perceived effect at baseline	.124	.116	.090	1.065	.289
	Working Alliance Inventory total score	.082	.029	.402	2.857	.005
	Contrast of SMT vs GE	2.016	3.601	.397	.560	.577
	SMTvsGEWAL	-.007	.036	-.130	-.184	.855



## PSFS – motor control & general exercises

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.918	7.175		.407	.685
	Patient-specific functional scale total score at baseline	.600	.128	.396	4.689	.000
	Working Alliance Inventory total score	.055	.072	.108	.769	.443
	Contrast of SSE vs GE	1.922	8.913	.149	.216	.830
	SSEvsGEWAL	.010	.089	.078	.112	.911



## PSFS – motor control & SMT

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.099	5.322		-1.146	.254
	Patient-specific functional scale total score at baseline	.623	.120	.415	5.183	.000
	Working Alliance Inventory total score	.175	.054	.376	3.279	.001
	SSEvsSMTWAL	-.111	.074	-.865	-1.490	.139
	Contrast of SSE vs SMT	0.730	7.412	.827	1.448	.150



## PSFS – general exercises & SMT

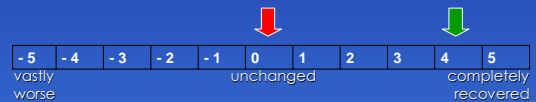
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.422	6.860		.353	.725
	Patient-specific functional scale total score at baseline	.736	.121	.467	6.075	.000
	Working Alliance Inventory total score	.047	.068	.086	.681	.498
	Contrast of SMT vs GE	-9.239	8.537	-.682	-1.082	.282
	SMTvsGEWAL	-.124	.085	-.912	1.449	.150



## interpretation

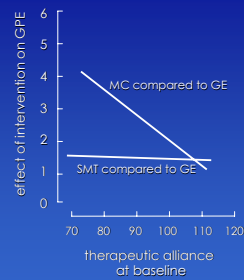
✓ therapeutic alliance predicts GPE at 8 weeks

✓ when motor control and GE are pooled, the coefficient is 0.082, so for every 1 point increase in alliance we have a 0.082 increase in GPE



## implications

- ✓ back to the size dilemma
- ✓ outcome dependent
- ✓ intervention dependent
- ✓ what is behind a positive alliance?
- ✓ can we optimize it?



at the end...



what matters...

