Critique author	**Ed Whitney**

Bibliographic Data	
Authors	Vong SK, Cheing GL, et al.
Title	Motivational enhancement therapy in addition to physical therapy improves motivational factors and treatment outcomes in people with low back pain: a randomized controlled trial.
PMID	21272712
Citation	Arch Phys Med Rehabil 2011;92:176-83.
Other information if relevant	

Methods	
Aim of study	To assess the effectiveness of adding motivational enhancement therapy (MET) to conventional physical therapy (PT) in the setting of chronic low back pain
Design	Randomized clinical trial

Participants	
Population from which participants are drawn	Outpatients with low back pain attending a PT clinic
Setting (location and type of facility)	A physical therapy clinic in a department of rehabilitation services in Hong Kong
Age	45
Sex	48 women, 28 men
Total number of participants for whom outcome data were reported	76
Inclusion criteria	Age 18 to 65 with a diagnosis of low back pain lasting at least 3 months

Exclusion criteria	Cardiac pacemaker, pain from neurologic disorders or rheumatologic disease, consistent symptoms of sciatica, spondylolisthesis more than l cm, PT for LBP in the past 3 months, psychiatric problems, or compensation for work-related disabilities
Other information if relevant	

Intervention Groups

Group 1	
Group name	MET+PT
Number in group	38
Description of intervention	- Treatment by physical therapists who had received 8 hours of training in Motivational Interviewing (MI), which aims at improving the motivation and commitment of patients to achieving behavioral changes - MI involves having the therapist utilize 4 principles in interacting with patients: (1) expressing accurate empathy, (2) developing discrepancy, (3) avoiding argumentation, and (4) supporting self-efficacy - What happened during the sessions is not clearly specified (for example, whether back-specific exercises were done or whether modalities of any kind were applied) - MI emphasizes psychosocial factors such as proxy efficacy, treatment efficacy, and working alliance
Duration of treatment period	8 weeks, during which each patient received 10 sessions of treatment lasting 30 minutes
Co-interventions if reported	Unclear
Additional information if relevant	

Group 2	
Group name	Conventional PT
Number in group	38

Description of intervention	- Each 30 minute session consisted of 15 minutes of interferential therapy and a tailor-made back exercise program - The physical therapists in the conventional PT group did not receive MI training, but received general communication skills training from a clinical psychologist
Duration of treatment period	Same as MET+PT group
Co-interventions if reported	An exercise booklet with detailed descriptions of stretching and strengthening exercises for the lower limb and the trunk
Additional information if relevant	

Primary outcome	
Outcome name and criteria for definition	- Motivational status, as measured by two questionnaires: the Patient Rehabilitation Expectations Scale (PRSE) and the Pain Self-Efficiency Questionnaire PSEQ - The PRSE has subscales for proxy efficacy, treatment efficacy, and working alliance
Time points measured and/or reported	Session 1, session 5, and session 10
Differences between groups	- The MET+PT group had scores which were significantly higher than the conventional PT group on both PRSE and PSEQ
Additional information if relevant	- Scores are presented for the questionnaire results, but there is no indication as to what constitutes a clinically important difference

Secondary outcomes	
Outcome name and criteria for definition	- Pain intensity - Range of trunk motion - Lifting capacity measured with a strain gauge with the subject standing on a wooden board with feet spread shoulder distance apart - Roland Morris disability questionnaire
Time points measured	Baseline, session 5, session 10, and one month followup

Differences between groups	- Pain intensity—no group difference - Range of trunk motion—no group difference - Lifting capacity—MET+PT group had greater lifting capacity than the conventional PT group at baseline, and greater lifting capacity at followup, and the differences remained statistically significant after adjusting for the baseline differences, with a 95% confidence interval from 1.10 to 10.03 kg - Roland-Morris—no group difference
Additional information if relevant	

Conclusions	
Key conclusions of study authors	- MET+PT treatment produces higher motivational status compared to conventional PT alone in patients with chronic low back pain - This in turn produced significant improvements in lifting capacity and compliance with exercise after 1 month of followup

Risk of bias assessment		
Domain	Risk of bias Low High Unclear	Comments
Random sequence generation *(selection bias)*	Low	
Allocation concealment *(selection bias)*	Low	

Blinding of participants and personnel *(performance bias)*	High	The treatments appear to differ in a variety of ways, and comparisons are hampered by a lack of description of what was done during the sessions of the experimental group. For example, while the conventional PT group had interferential therapy and specific back exercises from a booklet, it is not clear whether there was any physical contact between the therapist and the patient in the MET+PT group, nor is it clear what kind of exercise program was administered
Blinding of outcome assessment *(detection bias)*	High	The primary outcome instruments measure for proxy efficacy, treatment efficacy, and working alliance, the same items taught by the MI program itself, and there is no indication as to what constitutes a clinically relevant treatment effect The lifting capacity appears not to have been blinded, and performance on such tests, involving a strain gauge, could easily be influenced by the tester knowing which group the patient was assigned to
Incomplete outcome data *(attrition bias)*	Low	
Selective outcome reporting? *(reporting bias)*	Unclear	Presumably, the primary and secondary outcomes were prespecified in a study protocol when the study was planned, but this is not available, nor is it clear that the study was registered
Other bias		

Sponsorship if reported		
Study funding sources if reported	The outpatient department of the Princess Margaret Hospital in Hong Kong supported the study	
Possible conflicts of interest for study authors	None stated	
Notes:		

Comments by DOWC staff

- Most of the problems are outlined above, and involve high risk of bias with respect to the outcome measurements and group comparisons
- The study also suffers from lacking a clear description of what went on during the experimental group treatment sessions; for example, whether they consisted of 30 minutes of motivational interviewing only, of MI plus some sort of exercise, or some other combination of activities
- The MET+PT description in the Methods section (page 178) also suffers from an intrusion from an apparently irrelevant statement about "Dummy MET," which is not clearly defined, and also what the therapists in the conventional PT group did in adopting usual communication skills

Assessment by DOWC staff	
Overall assessment as suitability of evidence for the guideline ☐ High quality ☐ Adequate ☒ Inadequate	
If inadequate, main reasons for recommending that the article not be cited as evidence	The outcome measures are very likely to have been biased by an apparent lack of blinding of the lifting test, and by having the primary outcome measures not having definitions of clinically relevant differences. Familiar functional outcomes such as the Roland-Morris disability questionnaire did not differ between the groups, nor did pain VAS scores

Additional references if relevant
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