

**COMMENTARY ON: "KINESIO TAPING IN TREATMENT OF CHRONIC NON-SPECIFIC LOW BACK PAIN: A SYSTEMATIC REVIEW AND META-ANALYSIS"**

We recently read the systematic review by Sheng et al. on the effects of Kinesio Taping in patients with chronic non-specific low back pain (1). Although the research question of this systematic review was similar to those addressed in other reviews (2, 3), the results were completely different. This is the first systematic review to conclude that Kinesio Taping is efficacious for patients with low back pain.

A possible reason for this unique finding is that the authors only included trials published between 2012 and 2015 (despite Table I presenting trials published in 2016 and 2017). Also, the authors only included trials published in Chinese or English. Finally, no trials that compared Kinesio Taping with placebo, minimal interventions, or a wait-and-see approach were included in the review. The *Cochrane Handbook for Systematic Reviews of Interventions* (3) clearly warns of "language bias" (4), as studies published in non-English languages appear to have larger effects on interventions than studies published in English (most of the included trials are from China). In addition, the *Cochrane Handbook* strongly recommends that authors do not restrict the eligibility criteria based on publication dates. Finally, excluding placebo-controlled trials neglects the gold standard of clinical research. It is a pity that the reviewers did not point out these major fatal flaws, which ended up completely spinning the results.

The results of Sheng et al.'s review (1) are highly misleading for the following reasons: Firstly, by using questionable inclusion criteria many trials with very large samples and low risk of bias were excluded (e.g. Added et al. 2016 (5) and Parreira et al. 2014 (6)). Such trials can easily be found in PubMed and Physiotherapy Evidence Database (PEDro), for example. Secondly, the review included only trials that showed results in favour of Kinesio Taping, and ignored trials with negative results (i.e. spinning of results (7)). This is evident in both of the forest plots included in the systematic review. The issue of selection bias, due to including only positive trials, is clearly evident in the review. We strongly suggest that the results of this systematic review are interpreted with scepticism, as the positive effects were clearly overestimated.

Systematic reviews are considered the "gold standard" for determining the effectiveness of interventions and should be conducted in the most rigorous way possible. In this letter we have summarized the main points that could mislead readers to believe that Kinesio Taping could benefit people with chronic non-specific low back pain.

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REFERENCES

- Sheng Y, Duan Z, Qu Q, Chen W, Yu B. Kinesio taping in treatment of chronic non-specific low back pain: a systematic review and meta-analysis. *J Rehabil Med* 2019; 51: 734–740.
- Luz Junior MAD, Almeida MO, Santos RS, Civile VT, Costa LOP. Effectiveness of Kinesio taping in patients with chronic nonspecific low back pain: a systematic review with meta-analysis. *Spine (Phila Pa 1976)* 2019; 44: 68–78.
- Higgins JPT, Green S. *Cochrane Handbook for Systematic Reviews of Interventions*: Chichester (UK): Wiley; 2011.
- Shiwa SR, Moseley AM, Maher CG, Pena Costa LO. Language of publication has a small influence on the quality of reports of controlled trials of physiotherapy interventions. *J Clin Epidemiol* 2013; 66: 78–84.
- Added MA, Costa LO, de Freitas DG, Fukuda TY, Monteiro RL, Salomao EC, et al. Kinesio taping does not provide additional benefits in patients with chronic low back pain who receive exercise and manual therapy: a randomized controlled trial. *J Orthop Sports Phys Ther* 2016; 46: 506–513.
- Parreira PC, Costa LC, Takahashi R, Hespanhol Junior LC, Luz Junior MA, Silva TM, et al. Kinesio taping to generate skin convolutions is not better than sham taping for people with chronic non-specific low back pain: a randomised trial. *J Physiother* 2014; 60: 90–96.
- Chiu K, Grundy Q, Bero L. 'Spin' in published biomedical literature: a methodological systematic review. *Plos Biol* 2017; 15: e2002173.

RESPONSE TO LETTER TO THE EDITOR FROM DA LUZ JÚNIOR ET AL.

We have considered the feedback in the letter from da Luz Júnior et al. regarding our systematic review of Kinesio Taping for chronic low back pain. We have reviewed our article and we are aware of the limitations

of our study. However, to avoid misleading readers we would like to offer an explanation.

Firstly, the eligibility criteria, and inclusion and exclusion criteria were not restricted according to

publication dates. The criteria were adjusted in order to include new findings from relative research.

Secondly, with regard to language bias, the “PICOS” model was considered to be more important than the language of the articles. In addition, our original findings were based on the standard process. We apologize for the unsuitable choice of linguistic ratio in the included studies.

Thirdly, due to the limited samples, we could not confirm whether the conclusion of this study or the inference were based on placebo-controlled trials. However, we will take this into consideration in future research.

We consider the key point to be the comparison of efficacy of Kinesio Taping. Therefore, we directly selected studies describing the Kinesio Taping intervention in experimental groups. We acknowledge that the data analysis was inadequate due to the lack of

information about placebo-controlled trials. There is no specific and objective measurement of the curative results, including pain release and functional improvement for “low back pain”. Therefore, 2 general, subjective scales were selected for evaluation. Due to a probable lack of clarity regarding certain details, such as specific parameters of interventions across different groups, we did not consider the negative results. Moreover, we did not deem that additional investigation via further communication with corresponding authors was necessary. However, we realize that more specific and accurate considerations are required in order to avoid these limitations.

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