



## Letter to the Editor

**Letter to the Editor: “Effectiveness of movement control exercise on patients with non-specific low back pain and movement control impairment: A systematic review and meta-analysis 2018”**


Respected Editor,

The article “Effectiveness of movement control exercise on patients with non-specific low back pain and movement control impairment: A systematic review and meta-analysis by Luomajoki et al. have been published in August 2018. The authors have determined very low to moderate quality evidence, suggestive of positive effects of movement control exercise (MVCE) on disability (long term; short term) and pain severity (short term) in nonspecific low back pain (NSLBP). While the overall quality of the review is excellent, the inclusion criteria for the studies in the meta-analyses needs explanation.

The separate meta-analyses according to the diagnosis of the participants in the individual studies (i.e., NSLBP and movement control impairment) is precise. However, the inclusion of Henry et al., trial in the meta-analysis of the NSLBP group is arguable. Their study divided NSLBP participants into stabilization exercise subgroup of the treatment-based and movement control impairment (MCI) classification systems. The participants with MCI diagnosis (n = 76) received the specific treatment of MVCE. Therefore, the inclusion of this study in the NSLBP group is debatable. Besides, the Henry et al., study might increase the magnitude of the standard mean difference of intervention due to the large sample size, if included in the MVCE meta-analyses.

The second concern is the inclusion of the study by Salamat et al. in the MVCE subgroup meta-analysis. This study included participants with only extension-related low back pain and excessive lumbar lordosis. So, it is unclear that these participants were appropriate for the movement impairment classification. The diagnosis of movement control impairment is usually confirmed by the presence of an uncontrolled movement during various functional activities or with a test battery as mentioned in the other studies of the review. The article by Samalat

et al. did not state such an explicit inclusion criterion and thus would better align with NSLBP subgroup. Furthermore, the low sample size (n = 32) and the poor methodological quality (PEDro score = 4) of this study could have undermined the overall effect size of the MVCE intervention.

I thank the authors for their valuable contribution. However, further clarification about the meta-analyses subgroups is warranted.

#### Declarations of interest

None.

#### References

- Henry, S.M., Van Dillen, L.R., Ouellette-Morton, R.H., Hitt, J.R., Lomond, K.V., DeSarno, M.J., Bunn, J.Y., 2014. Outcomes are not different for patient-matched versus non-matched treatment in subjects with chronic recurrent low back pain: a randomized clinical trial. *Spine J.* 14 (12).
- Luomajoki, H.A., Beltran, M.B., Careddu, S., Bauer, C.M., 2018 Mar 28. Effectiveness of movement control exercise on patients with non-specific low back pain and movement control impairment: a systematic review and meta-analysis. *Musculoskelet. Sci. Pract.* 36, 1–11.
- Salamat, S., Talebian, S., Bagheri, H., Maroufi, N., Shaterzadeh, M.J., Kalbasi, G., O'Sullivan, K., 2017. Effect of movement control and stabilization exercises in people with extension related non-specific low back pain-a pilot study. *J. Bodyw. Mov. Ther.* 21 (4), 860–865.

Y.V. Raghava Neelapala

Department of Physiotherapy, School of Allied Health Sciences, Manipal Academy of Higher Education, Karnataka, India  
E-mail address: [yv.raghava@manipal.edu](mailto:yv.raghava@manipal.edu).