

“To the Editor of the Journal of Pain Research” [Letter]

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Dear editor

We would like to express a concern with a recent systematic review which aimed to characterise the placebo effect in trials for spine procedures.¹ The authors extracted baseline and follow-up outcome measures within the sham arms of trials and conducted meta-analysis on these data. This method is not appropriate for the aims of the review because it does not measure the placebo effect.

The placebo effect can only be measured by comparing outcomes in the placebo arm to outcomes in the “no treatment” arm.² In this review, the within-group change of the sham arms was incorrectly labelled “the placebo effect”. The authors acknowledge that their measure of the placebo effect was confounded by other factors such as statistical factors, biological properties of the disease progression and psychological aspects of receiving attention by clinical staff. Given they understood this issue, it is puzzling why they persisted with this flawed measure of the placebo effect.

The language used in this article, eg, describing the within-group change over time as “the placebo effect”, is misleading. Arguing that placebo has different effects in patients whose pain arises from the disc, facet joint or SIJ is also misleading. It is possible that these types of back pain have different natural histories. The paper overstates the placebo effect because when the placebo effect is studied with correct methods (by comparing a “placebo” arm to a “no treatment” arm), the placebo effect on pain outcomes is typically small (SMD -0.28 (-0.36 to -0.19)).²

It is a common misunderstanding that placebos can have large and powerful clinical effects.³ This view is probably driven by studies like this one that incorrectly calculate the size of the placebo effect. Three reviews cited in this review also incorrectly calculate the placebo effect as within group change.⁴⁻⁶ If we are to understand what, if any, role placebos have in clinical care, we first need to measure it correctly.

Disclosure

All authors declare no conflict of interest in this communication.

References

1. Jamjoom AM, Saeedi RJ, Jamjoom AB. Placebo effect of sham spine procedures in chronic low back pain: a systematic review. *J Pain Res.* 2021;14:3057. PMC8488027. doi:10.2147/JPR.S317697

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2. Hróbjartsson A, Gøtzsche PC, Group CC and C. Placebo interventions for all clinical conditions. *Cochrane Database Syst Rev*. 2010;2010(1):CD003974. PMC7156905.
3. Maher CG, Traeger AC, Abdel Shaheed C, O'Keeffe M. Placebos in clinical care: a suggestion beyond the evidence. *Med J Aust*. 2021;215(6):252–253.e1. doi:10.5694/mja2.51230
4. Gu A, Gu C, Ahmed A, et al. Sham surgical procedures for pain intervention result in significant improvements in pain: systematic review and meta-analysis. *J Clin Epidemiol*. 2017;83:18–23. doi:10.1016/j.jclinepi.2016.12.010
5. Wartolowska KA, Feakins BG, Collins GS, et al. The magnitude and temporal changes of response in the placebo arm of surgical randomized controlled trials: a systematic review and meta-analysis. *Trials*. 2016;17(1). PMC5154040. doi:10.1186/s13063-016-1720-7
6. Wartolowska K, Gerry S, Feakins B, et al. A meta-analysis of temporal changes of response in the placebo arm of surgical randomized controlled trials: an update. *Trials*. 2017;18(1). doi:10.1186/s13063-017-2070-9

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