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Spin in the abstract in “Impact of motivational interviewing on outcomes of an adolescent obesity treatment: Results from the MI Values randomized controlled pilot trial”

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Dear Editor,

We read with interest the article by Bean et al entitled “Impact of motivational interviewing on outcomes of an adolescent obesity treatment: Results from the MI [Motivational Interviewing] Values randomized controlled pilot trial.”[1] The authors contribute an important randomized controlled trial on the effect of MI on obesity-related outcomes. We wish to respectfully underscore a point of disagreement in the language used in the abstract to communicate the results of the trial. This report included as outcomes (a) self-reported energy intake, (b) self-reported physical activity and (c) body mass index (BMI) z-score. The trial assessed each at baseline, 3 and 6 months, and performed a repeated measures analysis of variance on each outcome. A statistically significant Group $\times$ Time interaction at 3 months but not 6 months for energy intake was found, and no interaction at either time point for BMI z-score or physical activity was found. In contrast, the authors report in the abstract that “MI might be an effective adjunct to adolescent obesity treatment.” It should be clarified in the abstract that BMI z-score was not different between groups at either time point, as properly characterized in the paper’s discussion, and thus the conclusions should more appropriately conclude that this investigation did not support motivational interviewing as effective.

Even if one accepted self-reported energy intake and physical activity as valid for estimates of their actual counterparts (which many do not),[2] changing food intake and/or physical activity levels, absent an effect on BMI, cannot be characterized as effectiveness with respect to obesity per se. Therefore, conclusions about effects on obesity based only on behaviour change (whether self-reported or not) are unwarranted. Finally, the authors mention significant reductions in BMI z-scores over time within groups. Individuals sampled at the extremes of a distribution tend to regress towards the mean over time and given the modest changes in BMI z-score, regression to the mean within groups cannot be ruled out. That is why the between-group comparison is the probative one.[3]

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Spin, defined as “specific intentional or unintentional reporting that fails to faithfully reflect the nature and range of findings and that could affect the impression the results produce in readers,” is pervasive in biomedical literature.[4] Although seemingly innocuous, the abstract’s language is crucial to accurately communicating study results because it serves as an initial access point to the full paper. The influence of spin in interpreting results was demonstrated in a randomized controlled trial in which spin in study abstracts (similar to this case) led to clinicians inappropriately rating cancer treatments as more beneficial.[5] The authors report the results of an important investigation, and a stronger contribution to science is the unvarnished conclusion that the investigation provides no compelling evidence to support MI as an adjunct to adolescent obesity treatment. We therefore request that the authors submit a corrigendum to make clear in the abstract that BMI z-score did not significantly change in response to the intervention.

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CONFLICTS OF INTEREST

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