

Correcting the description of the design to quasi-experimental instead of cluster-randomized: Corrigendum to “Effect of school-based interventions on body composition of grade-4 children from lower socioeconomic communities in Gqeberha, South Africa”

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Recently, a group from Nelson Mandela University, South Africa (SA), University of Basel, Switzerland, and Swiss Tropical and Public Health Institute, Switzerland, published a study on the effect of school-based interventions on body composition of children in Gqeberha, SA.^[1] A second group from Indiana University-Bloomington, noticed that although study was labeled a cluster randomized controlled trial (cRCT), the assignment of control schools to their condition was not random. The two groups met, collegially discussed the issue, and decided to jointly publish a corrigendum and re-label the study from a cRCT to a quasi-experimental study to uphold the integrity of the scientific record. Herein, the reasoning for this correction is outlined.

In the original paper, ‘Effect of school-based interventions on body composition of grade-4 children from lower socioeconomic communities in Gqeberha, South Africa’,^[1] eight schools were selected for the project based on the following criteria: $n > 100$ grade 4 learners, balanced target communities (4 x township v. 4 x northern area schools) and support from school principals and staff.

The eight schools were match-paired by the research team according to the geographical location (township v. northern areas), and thereafter by mother-tongue language/ethnicity (isiXhosa, English, Afrikaans, etc.). Four schools were randomly allocated to an intervention arm, and to each intervention school, a control school was assigned based on the geographical region (i.e. nonrandom). It is expected that randomisation balances the distributions of known and unknown pre-existing factors, producing an unbiased estimation of treatment effects thereby justifying causal inference.^[2] Allocation of schools to the control condition based on geographical location (a pre-existing factor) instead of randomly potentially added a source of bias, and thus this study should not be labelled a cRCT. Instead, this study should be labelled a quasi-experimental study. The numerical content discussed in the paper is not affected by these corrections. However, the interpretation of that numerical content is thus recognised as demonstrating association, and not necessarily causation.^[3,4,5]

Thus, language describing the study as ‘cluster-randomized’ in the abstract on page 89 and methods on page 90 should be replaced

by ‘quasi-experimental study’ and statements of causation should be taken to mean statements of association which may or may not represent causal effects.

[Correction of abstract on page 89](#)

A quasi-experimental study was carried out with children from 8 schools. Four schools were randomly allocated to 10-week school-based intervention, and to each intervention school, a control school was assigned based on the geographical region.

[Correction of paragraph on page 90 \(study design and participants\)](#)

A quasi-experimental study as part of the research project entitled ‘Disease, Activity and Schoolchildren’s Health (DASH)’ was implemented.

Conflicts of interest. Dr. Allison and his institution (Indiana University) have received payments for consultation, grants, contracts, in-kind donations, and contributions from multiple for-profit and not-for-profit entities interested in nutrition, food, child health, and statistical design and analysis of experiments, but not directly related to the interventions under the study in question.

1. S Nqweniso, R du Randt, L Adams, et al. Effect of school-based interventions on body composition of grade-4 children from lower socioeconomic communities in Gqeberha, South Africa. *S Afr J Child Health* 2021;15(2):89-98. <https://doi.org/10.7196/sajch.2021.v15.i2.1762>
2. Vorland C J, Brown A W, Dawson J A, et al. Errors in the implementation, analysis, and reporting of randomization within obesity and nutrition research: a guide to their avoidance. *Int J Obesity* 2021;45:2335-2346. <https://doi.org/10.1038/s41366-021-00909-z>
3. Shadish W R, Cook T D, Campbell D T. *Experimental and quasi-experimental designs for generalized causal inference*. New York: Houghton Mifflin Company .
4. Editors of the Heart Group Journals. Statement on matching language to the type of evidence used in describing observational studies vs. randomized trials. 2013;3491):20-21. <https://doi.org/10.1093/eurheartj/ehs386>
5. Harris AD, McGregor JC, Perencevich EN, et al. The use and interpretation of quasi-experimental studies in medical informatics. *J Am Med Inform Assoc* 2006;13(1):16-23. <https://doi.org/10.1197/jamia.M1749>

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