

Peer Review

Review of: "Graphical Examples Show Why Caution Is Required When Using the Coefficient of Determination (R^2) to Interpret Data for Medical Case Reports"

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This study can be considered valuable in the field of statistics, especially within the context of medical and clinical research. It highlights important limitations and potential pitfalls in the common use of the coefficient of determination (R^2) for evaluating data fit and treatment effects, particularly in small or non-linear datasets. The study promotes more thoughtful, accurate application of statistical tools, which is fundamentally beneficial for enhancing statistical rigor and interpretation in research.

Here are some suggestions for improvement:

- Analyze actual clinical datasets to validate the graphical and theoretical observations, enhancing practical relevance.
- Investigate other measures like effect sizes, confidence intervals, or residual analysis to provide a more comprehensive statistical framework.
- Also, you can create practical guidelines or decision trees for clinicians and researchers on when and how to use R^2 versus other effect measures.

Declarations

Potential competing interests: No potential competing interests to declare.