Regression Vs. ANOVA: Is a main effect really a main effect?

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Outline

Defining the problem

What you might see

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All stats in R have the same syntax

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What this talk is not about

- How to use R
- How to build a good mixed-effects model
- The *p*-value debate

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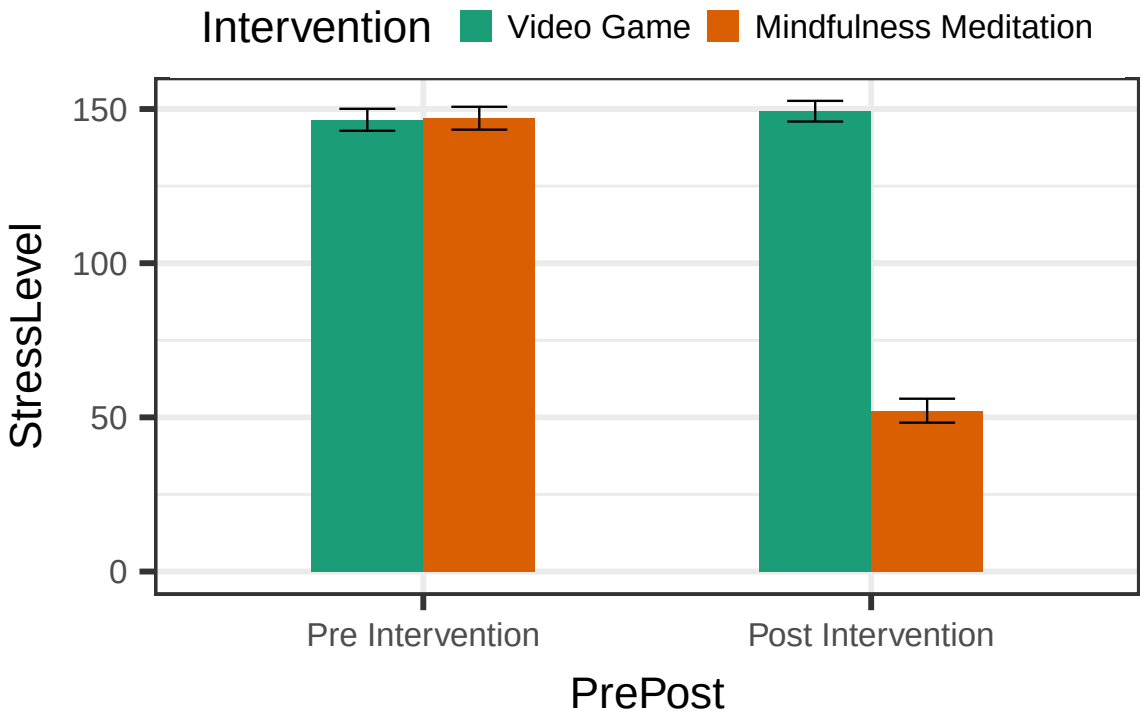

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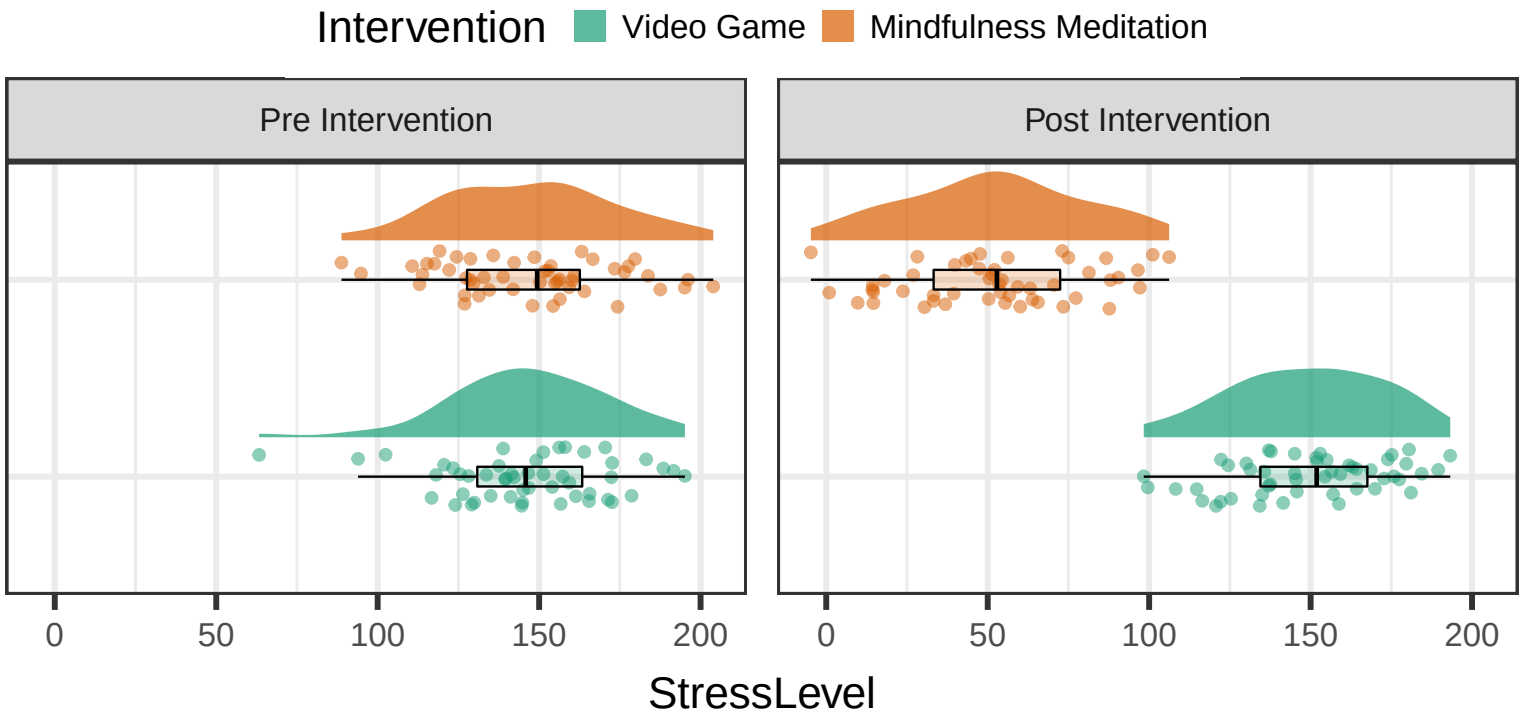

Regression and ANOVA results

Graphically understanding the regression results

Changes to the simulated data

Regression results

Graphically understanding the regression results

The experiment in a nutshell

Impact of the choice of reference levels

What's the take home message?