The Body Project: Comparing the Effectiveness of an In-person and Virtually Delivered Intervention

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Mixed effects modeling was used to control for potential lack of independence within cohort. Specifically, for each measure we fit the following model:

$$Posttest_{ij} = \beta_0 + b_j + \beta_1 cond_{ij} + \beta_2 Pretest_{ij} + e_{ij}$$

where $Posttest_{ij}$ is the posttest score for participant i in cohort j, $cond_{ij}$ is an indicator variable taking on the value of 0 for control and 1 for treatment, $Pretest_{ij}$ is the pretest score, b_j is the random intercept for cohort j, and e_{ij} is the residual. The intraclass correlation for cohort was approximately 0 for all measures, nonetheless, it was retained as this was a feature of the study design. Due to missingness at the posttest (ranged from 12% for number of eating symptoms to 24% for the other outcomes), multiple imputation was used (Graham, 2009). We imputed 50 datasets and applied Rubin's rules to pool results across the models. As a sensitivity analysis, models were fit using only participants with complete data. Models were fit in R (R Core Team, 2021) using the nlme package, the mice package was used for imputation (van Buuren, 2018) and plots were created using ggplot2 (Wickham, 2016).

References

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