

Type II Sum of Squares ANOVA Report

Outcome: G3

Factor A: studytime

Factor B: school

Model: additive two-factor ANOVA

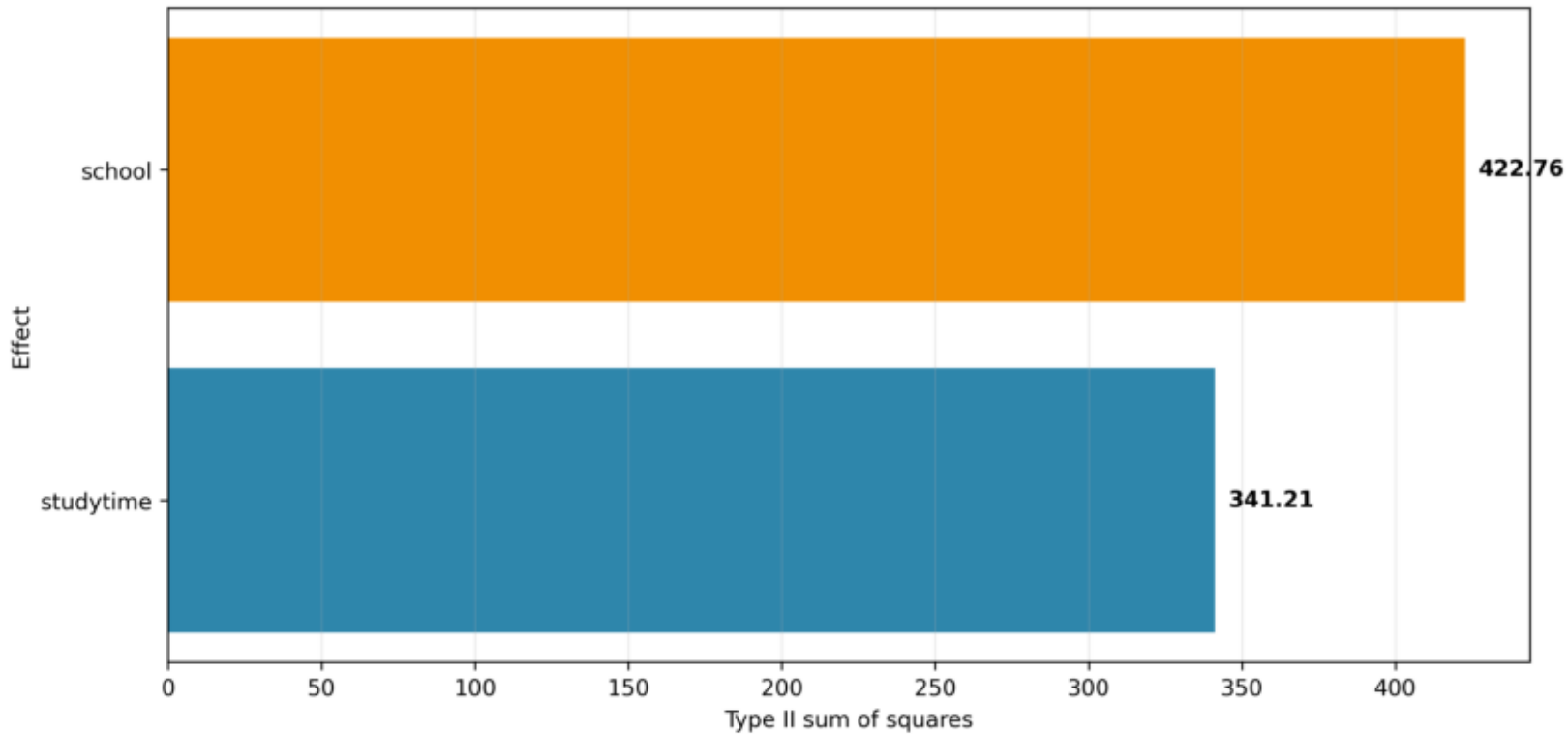
Type II SS tests each main effect after adjusting for the other main effect.

Use Type III SS instead if the interaction is central to interpretation.

	effect	effect_clean	sum_sq	type_ii	df	mean_sq	F	p_value	partial_eta_squared	decision_alpha_0_05
C(Q("studytime"))	studytime		341.211787	3.0	113.737262	12.466636	6.216577e-08		0.054887	Reject H0
C(Q("school"))	school		422.762615	1.0	422.762615	46.338618	2.281553e-11		0.067124	Reject H0

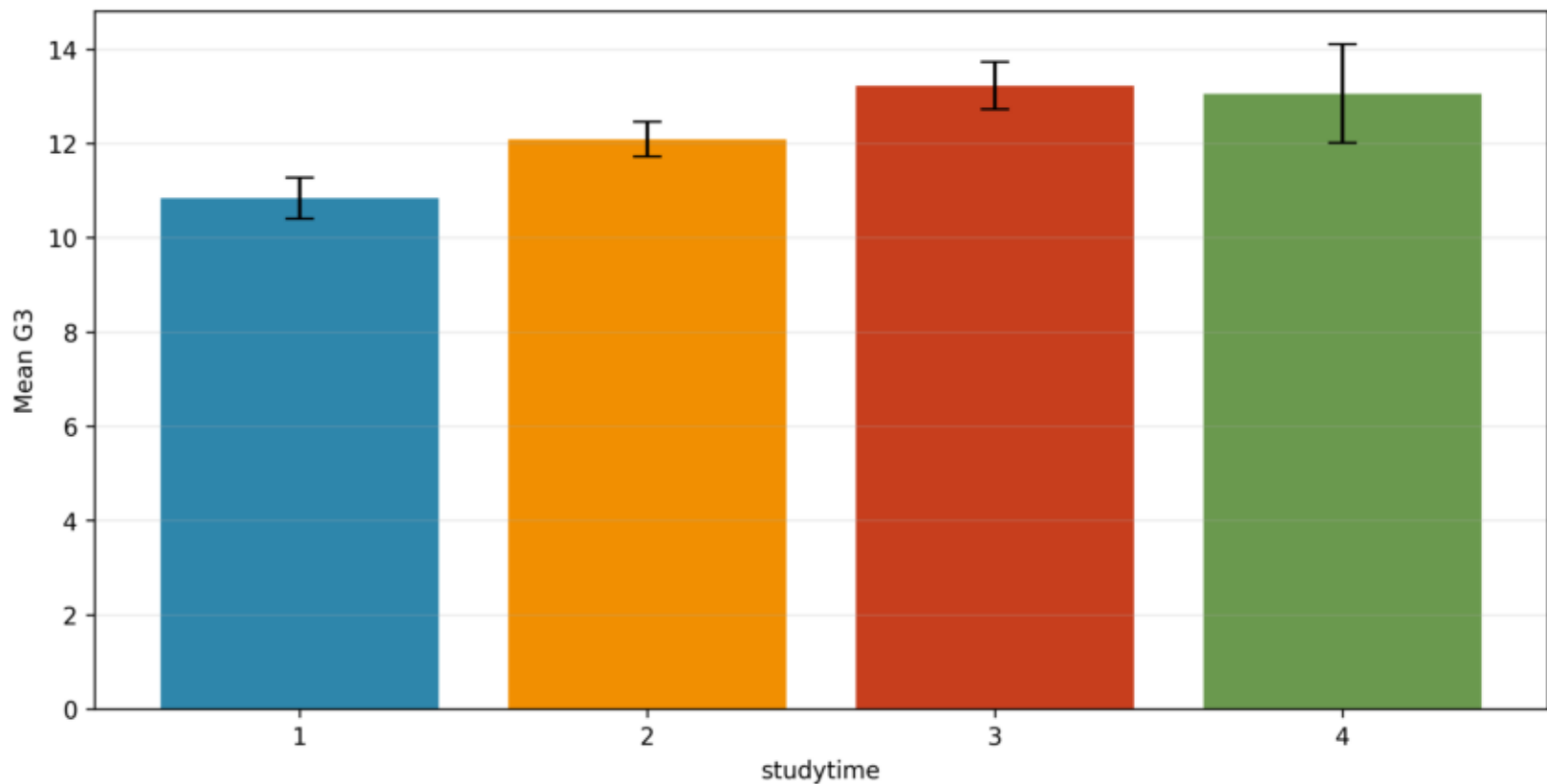
Type II Sum of Squares by Effect

Each bar shows the unique contribution of an effect after the other main effect.



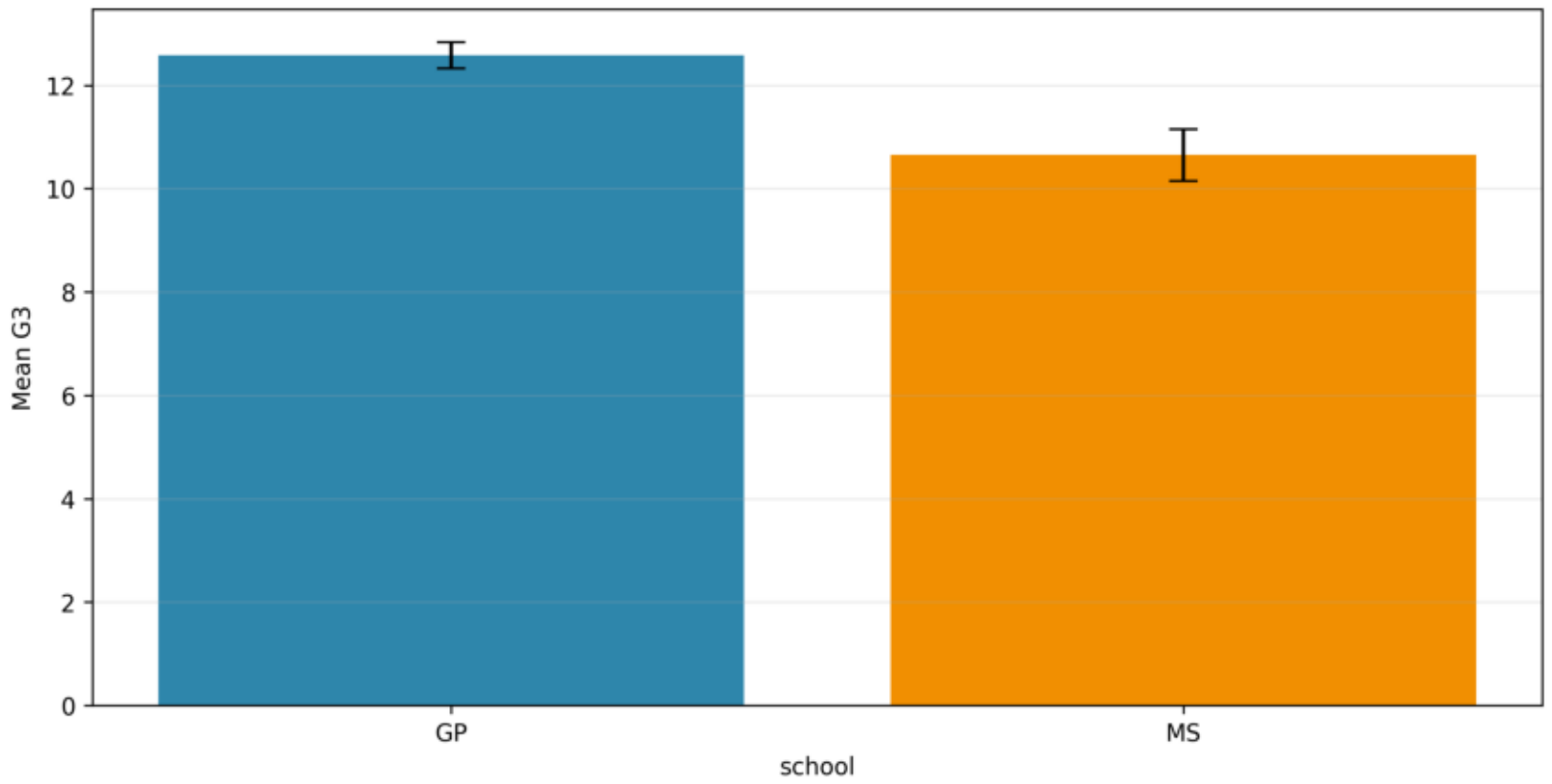
Mean G3 by studytime

Bars show group means with 95% confidence intervals.



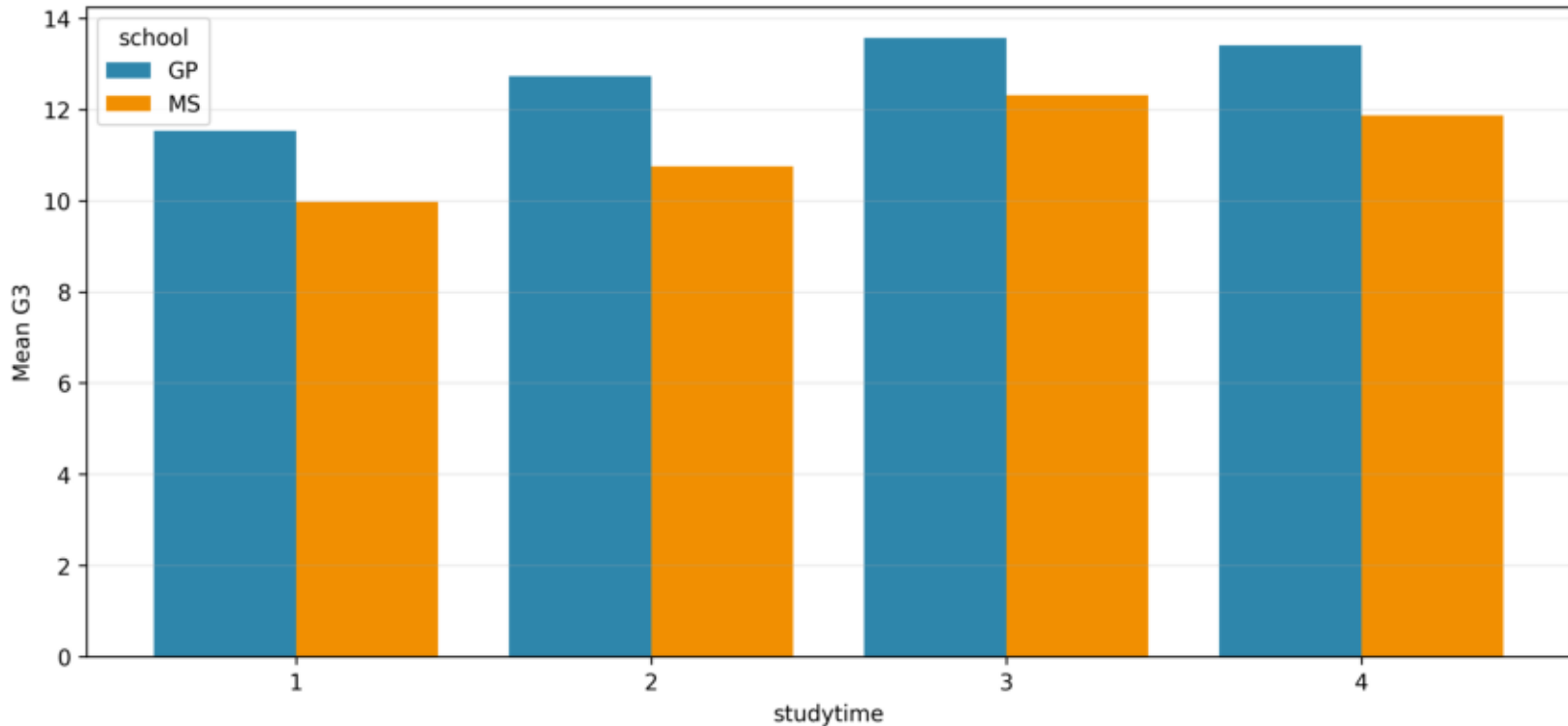
Mean G3 by school

Bars show group means with 95% confidence intervals.



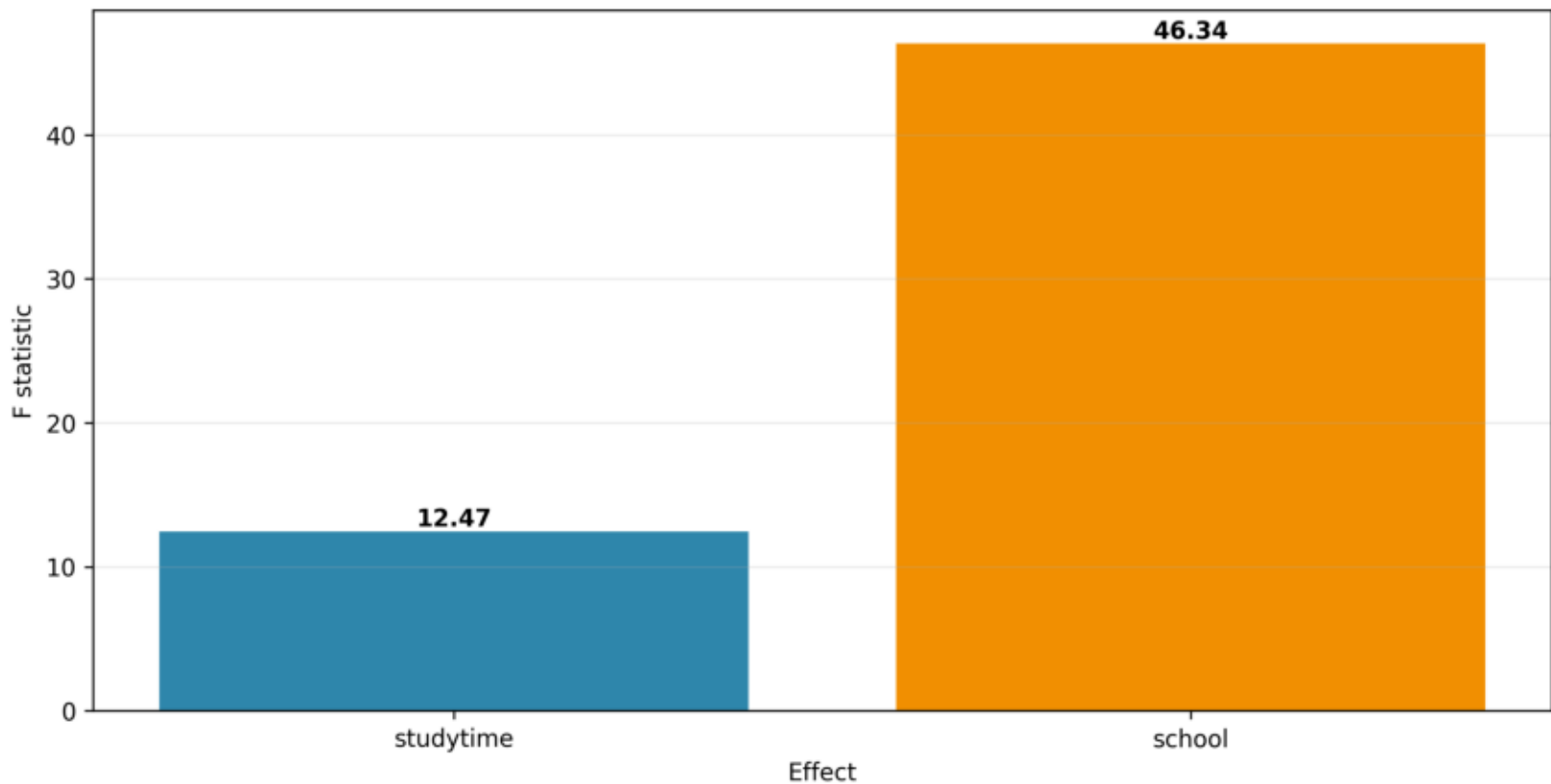
Two-Factor Cell Mean Pattern

Cell means show how the outcome changes across both factors.



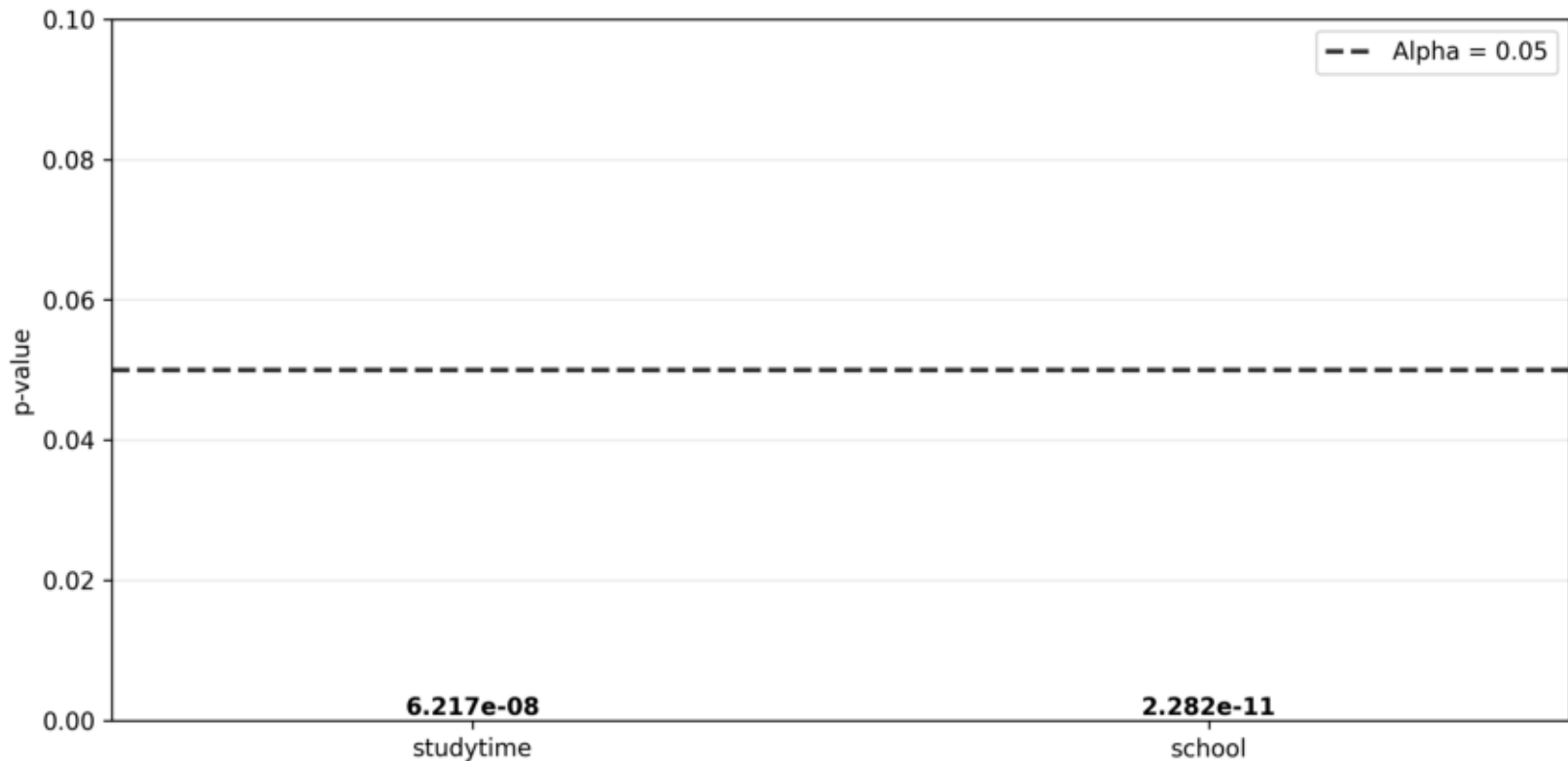
Type II ANOVA F Statistics

F statistics compare each effect mean square against the residual mean square.



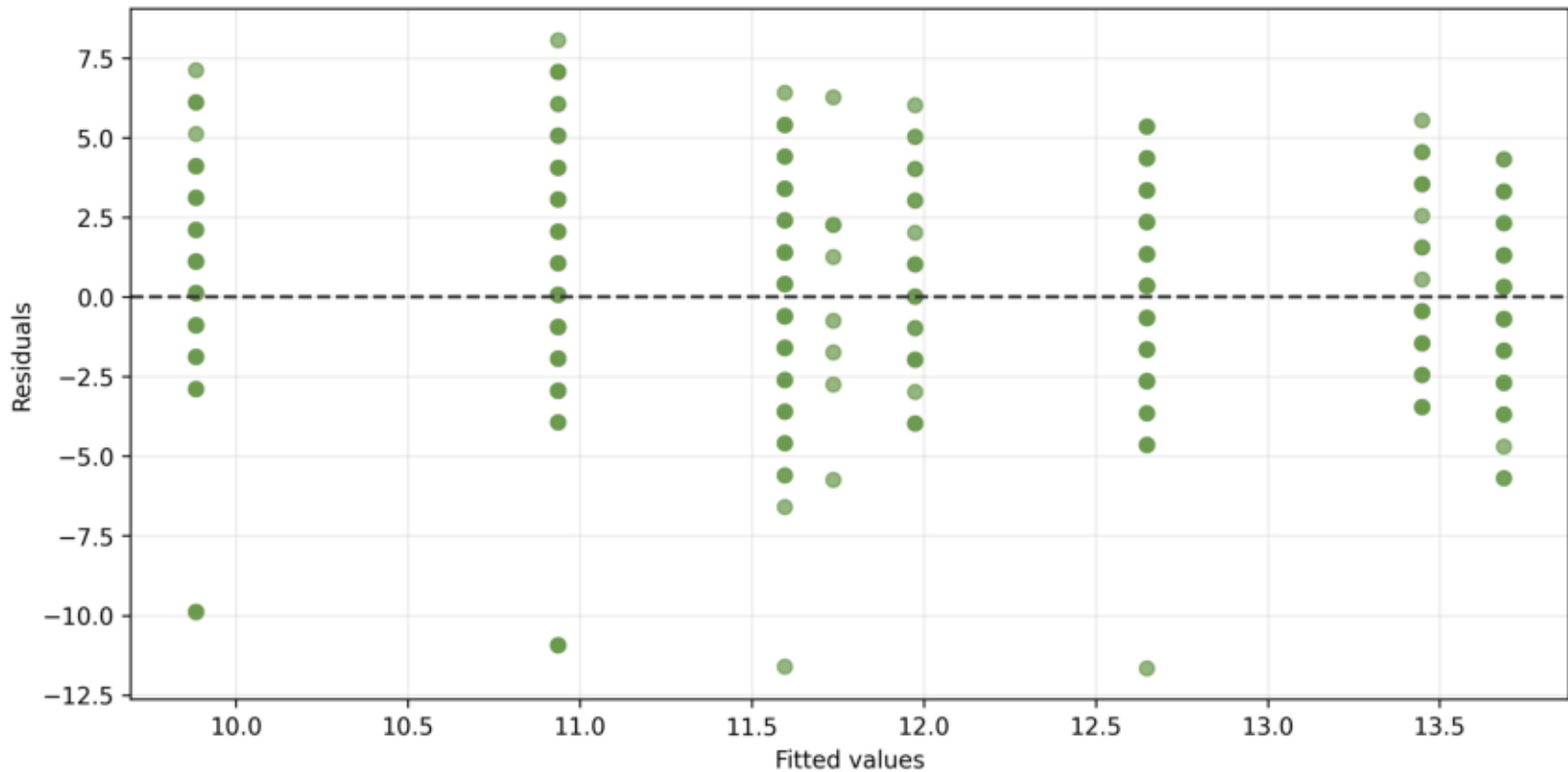
Type II ANOVA p-value Decision

Effects below alpha are statistically significant at the selected threshold.



Type II ANOVA Residuals vs Fitted Values

A random pattern around zero supports the additive ANOVA model.



Type II Sum of Squares ANOVA Summary

This table reports Type II SS, F, p-value, and partial eta squared.

Effect	df	Type II SS	F	p	partial eta ²	Decision
studytime	3	341.2	12.47	6.217e-08	0.05489	Reject H0
school	1	422.8	46.34	2.282e-11	0.06712	Reject H0