

Type II Sum of Squares ANOVA Report

Outcome: G3

Factor A: studytime

Factor B: school

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

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

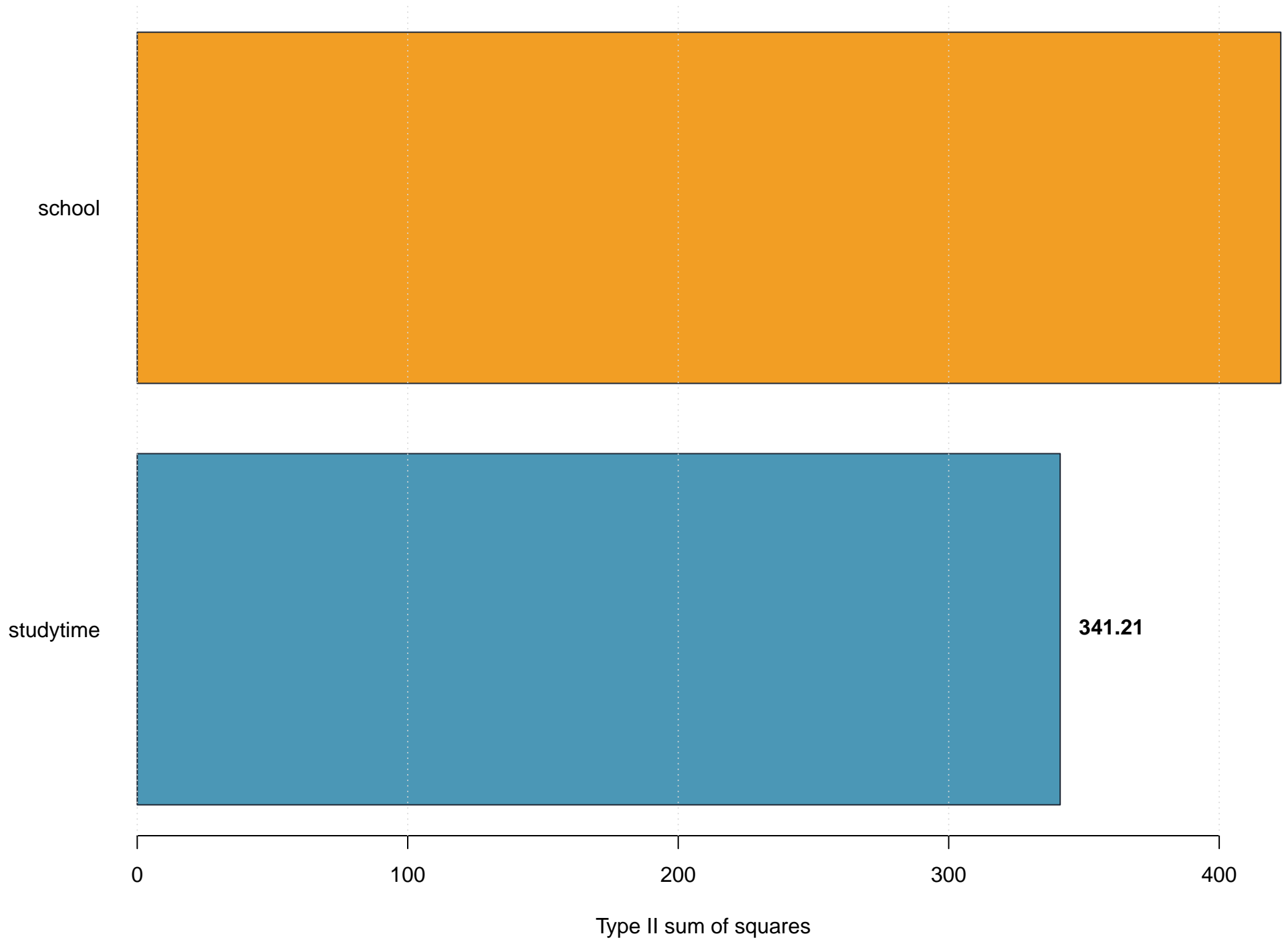
Result table:

effect	sum_sq	type_ii	df	mean_sq	F	p_value	partial_eta_squared	ss_error_used	df_error	alpha
studytime	341.2118	3	113.7373	12.46664	6.216577e-08	0.05488687	5875.426	644	0.05	
school	422.7626	1	422.7626	46.33862	2.281553e-11	0.06712448	5875.426	644	0.05	

decision_alpha_0_05
Reject H0
Reject H0

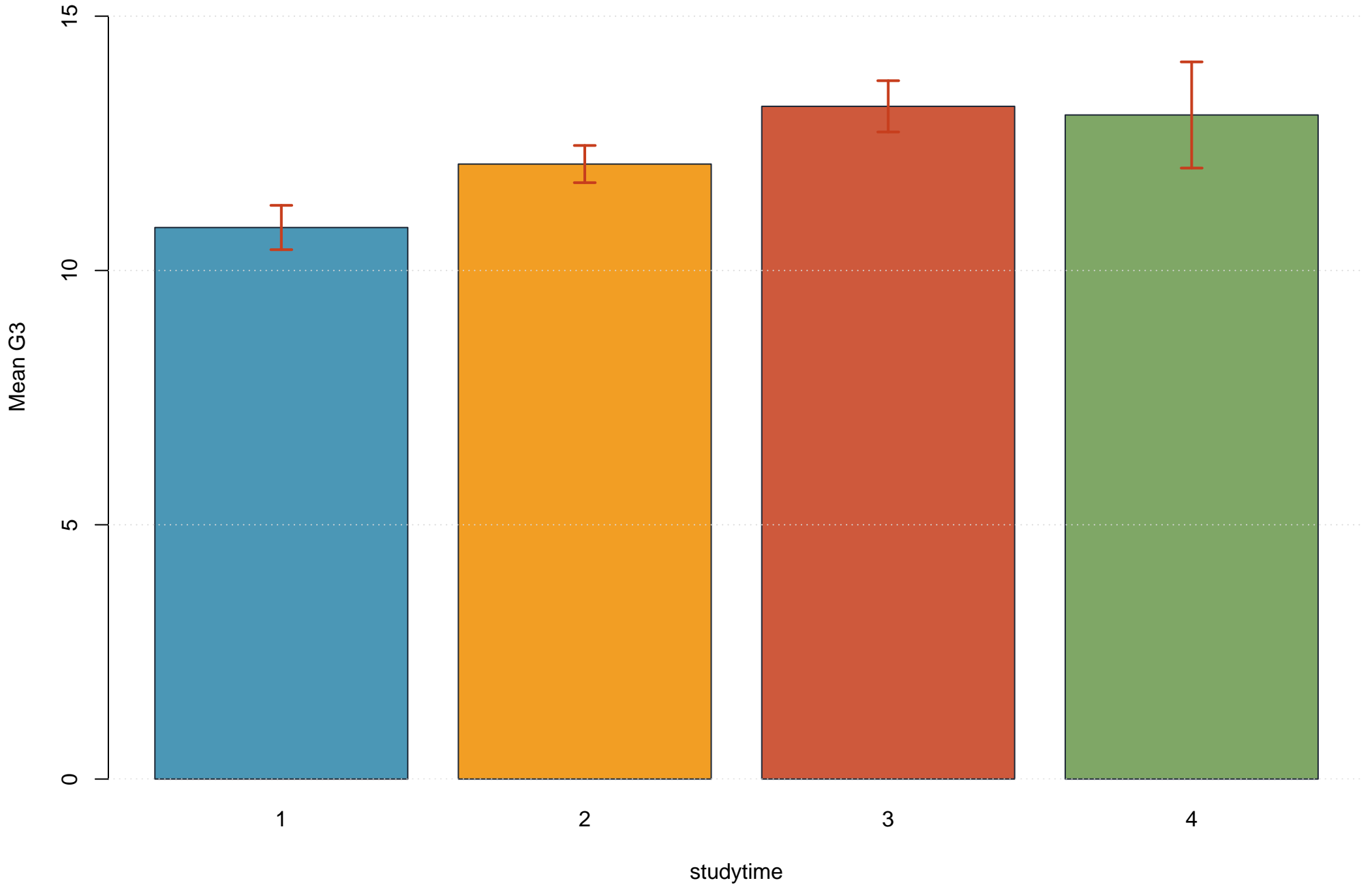
Type II Sum of Squares by Effect

Each bar shows an effect after adjustment for the other main effect.



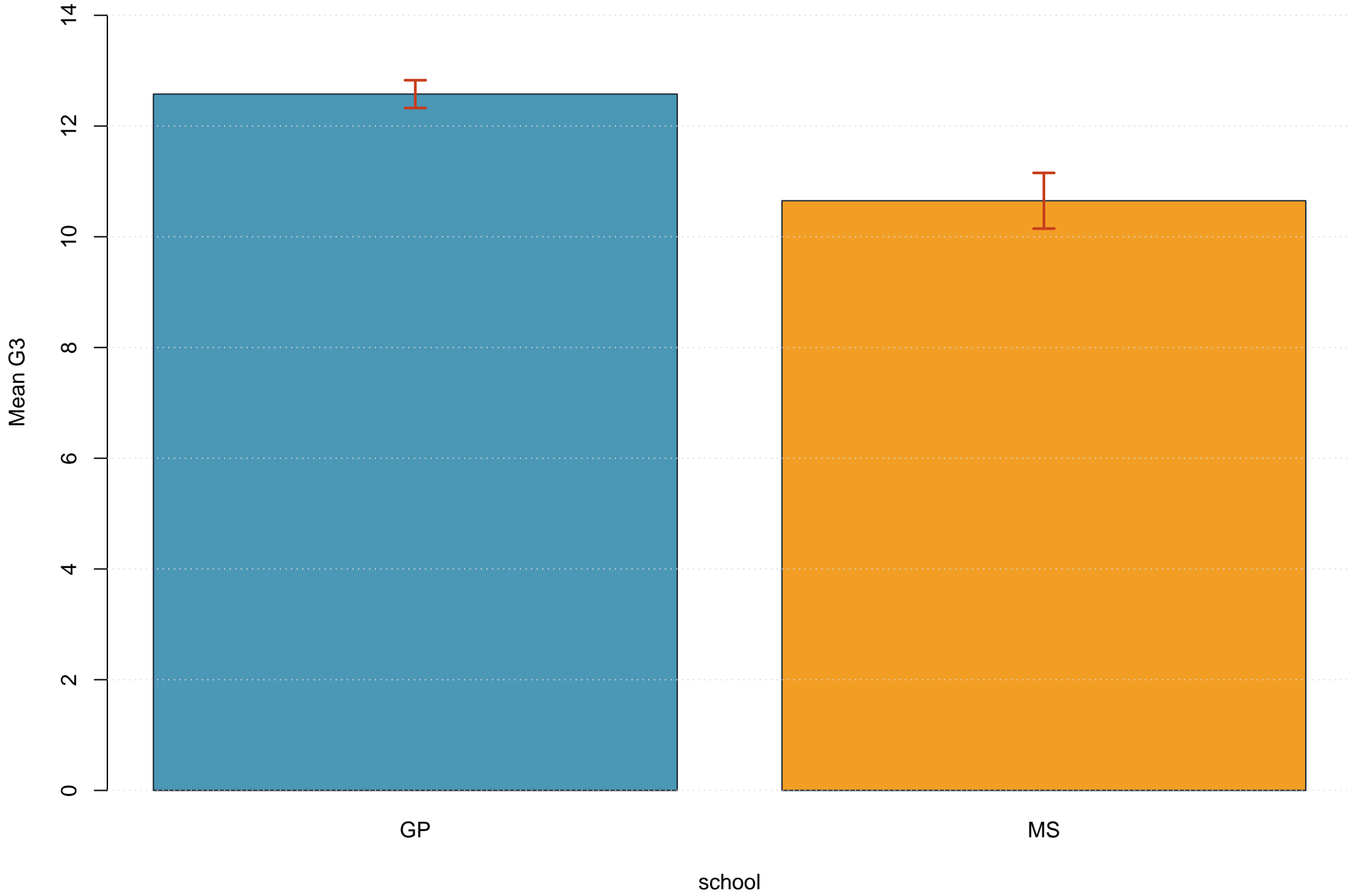
Mean G3 by studytime

Bars show group means with 95% confidence intervals.



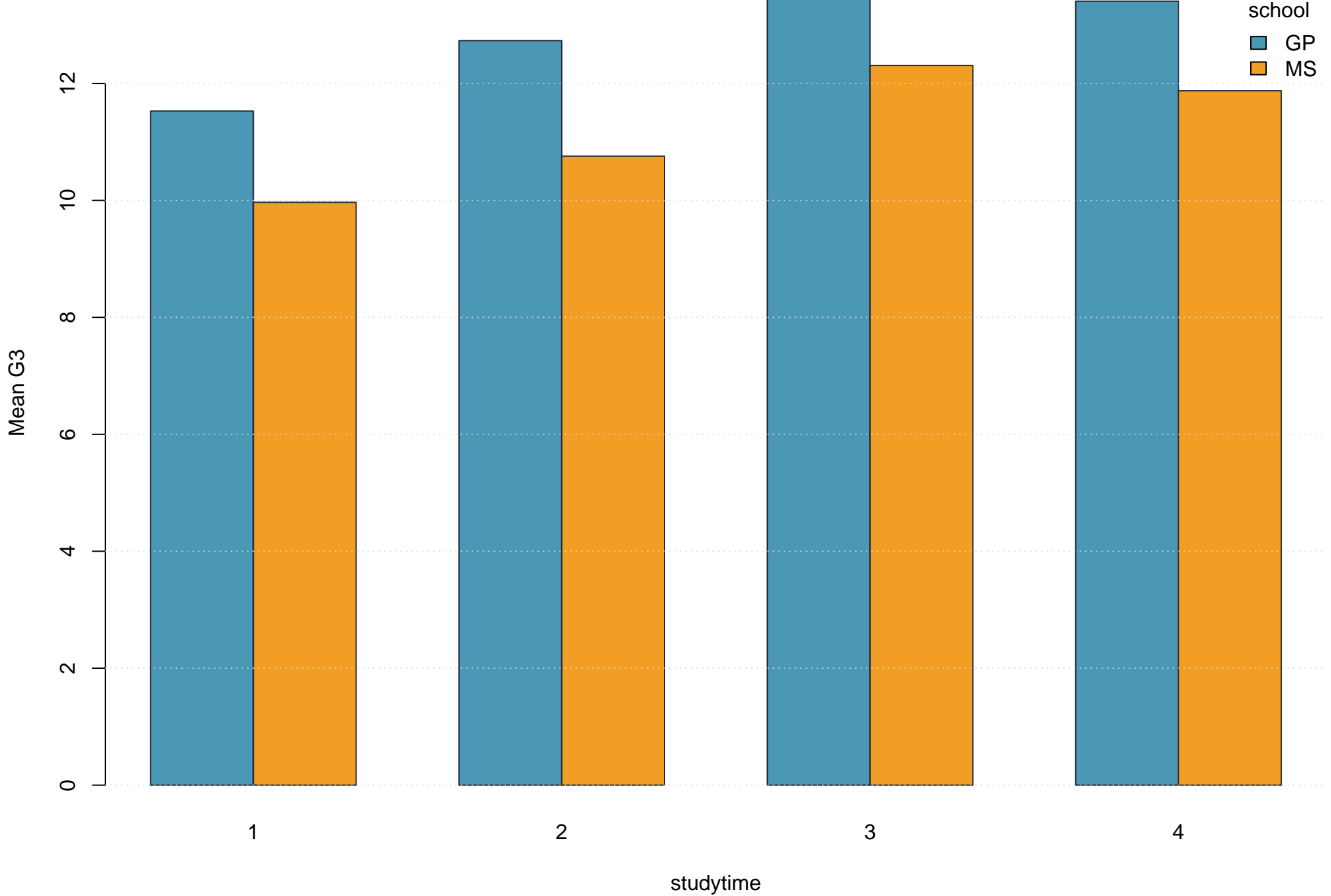
Mean G3 by school

Bars show group means with 95% confidence intervals.



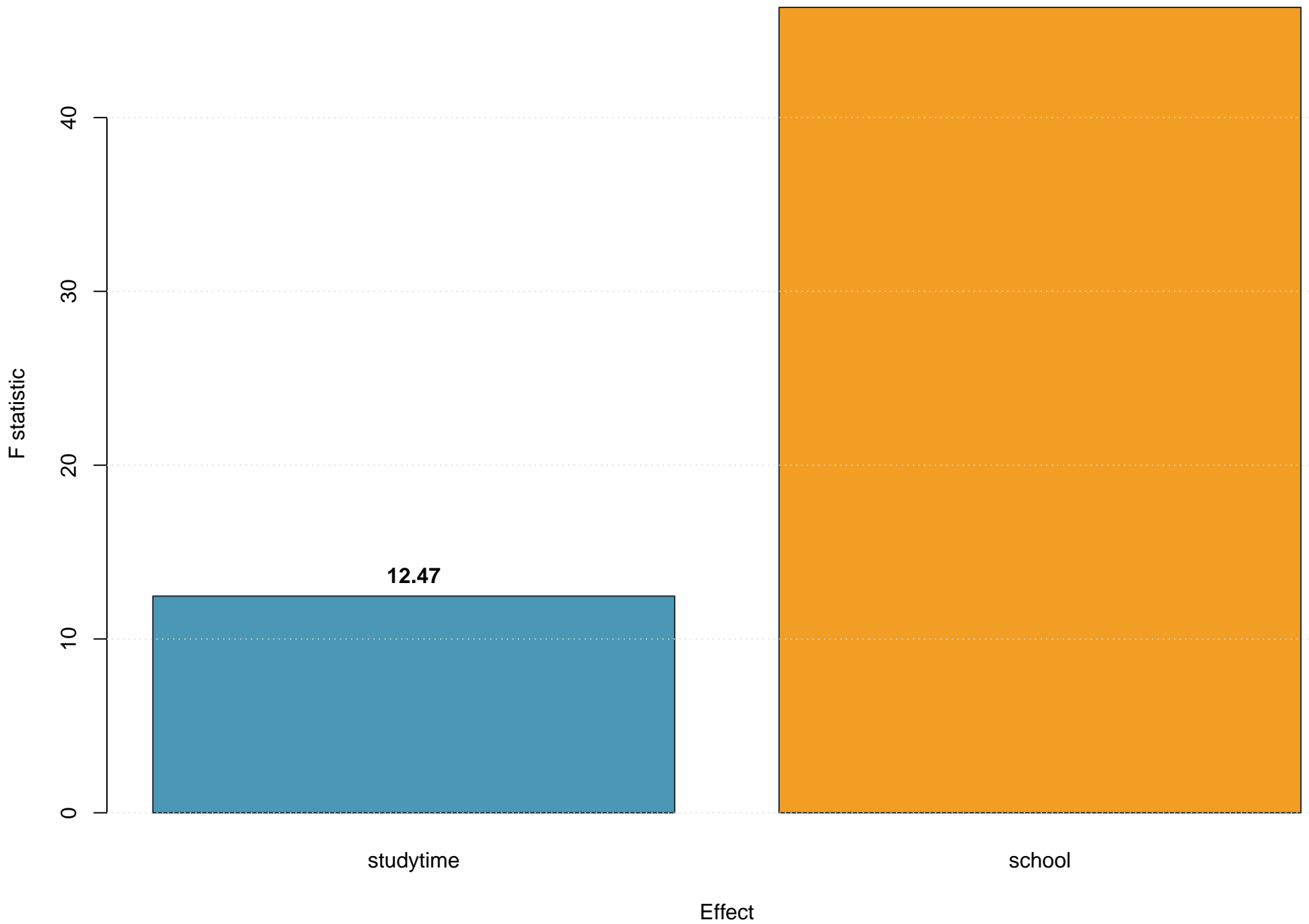
Two-Factor Cell Mean Pattern

Cell means show how the outcome changes across both factors.



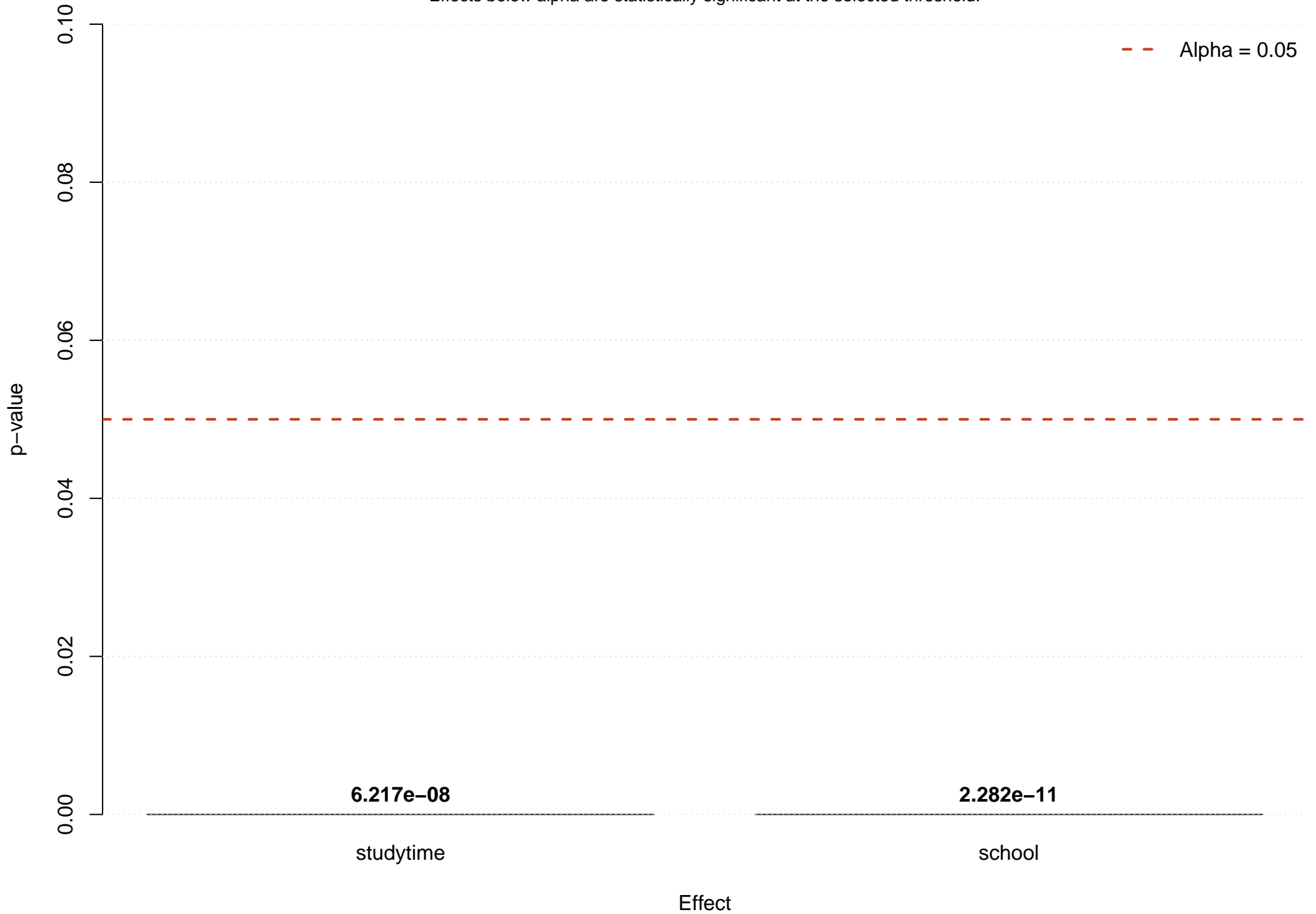
Type II ANOVA F Statistics

Each F statistic uses the full additive model residual mean square.



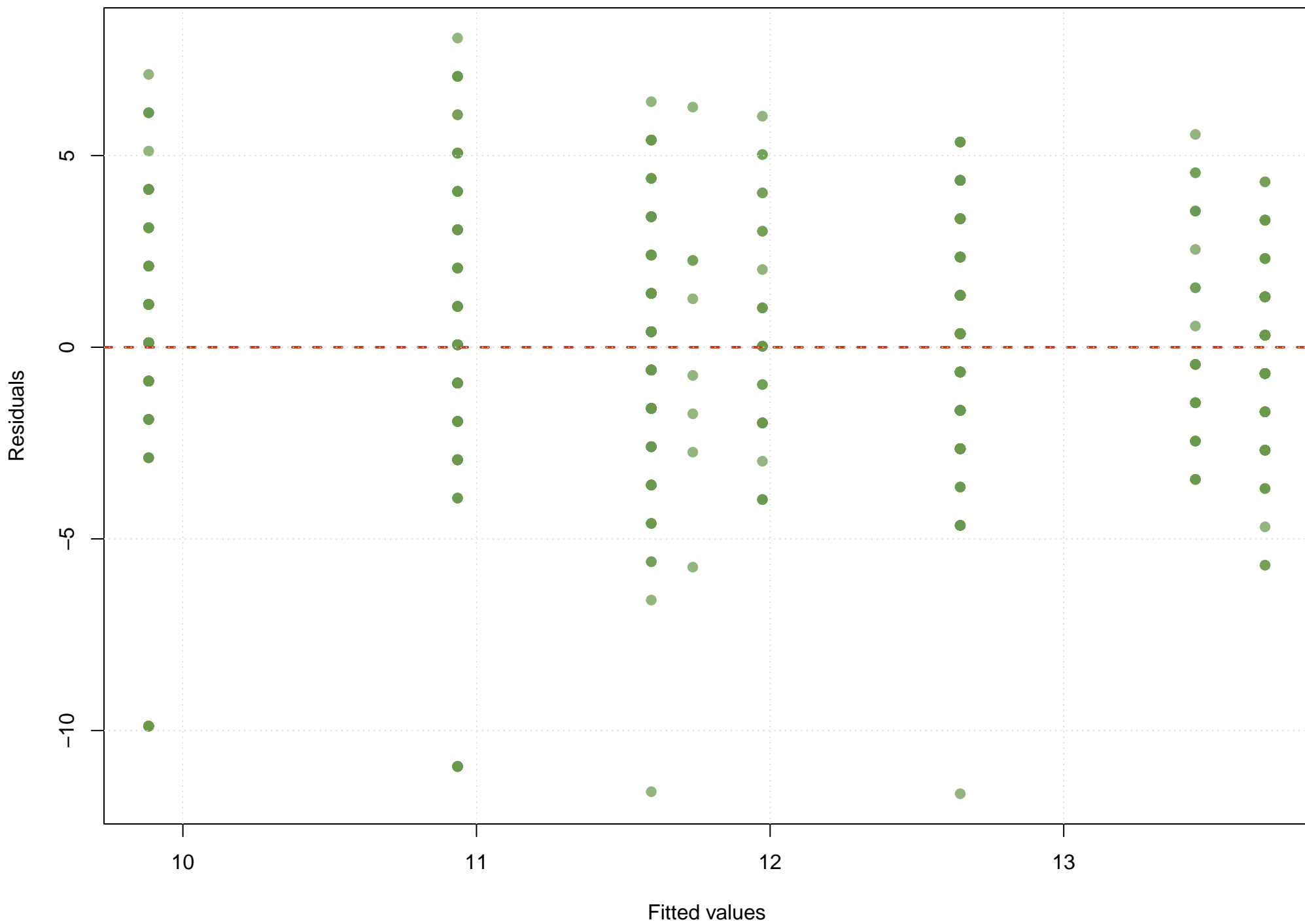
Type II ANOVA p-value Decision

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	sum_sq_type_ii	F	p_value	partial_eta_squared	decision_alpha_0_05
studytime	3	341.2	12.47	6.217e-08	0.0549	Reject H0
school	1	422.8	46.34	2.282e-11	0.0671	Reject H0