

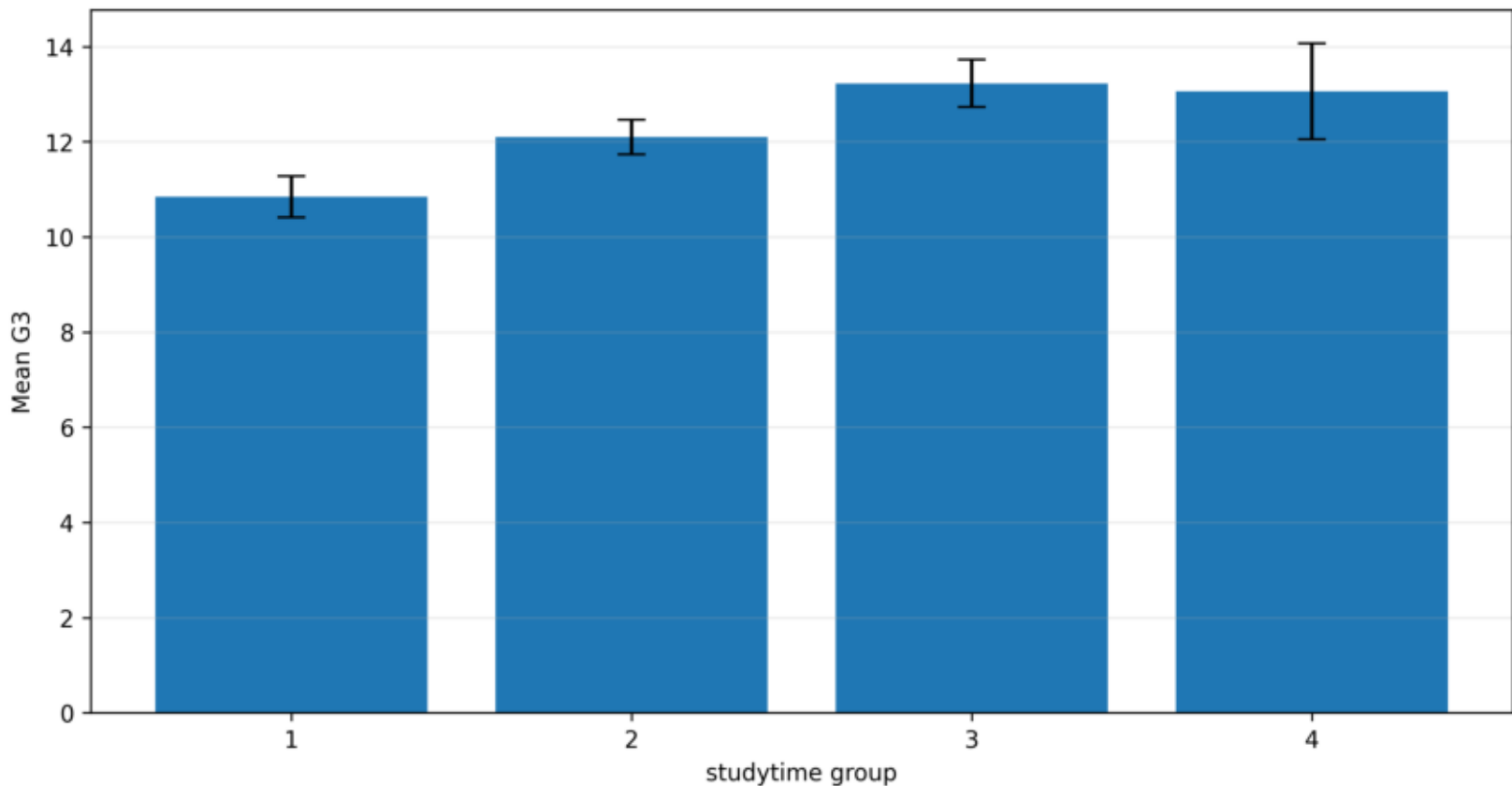
GLM ANOVA Python Report

	Model Outcome	Fixed factors	N	Model SS	Error SS	Total SS	df_model	df_error	MS Model	MS Error	Global F	Global P Value	Critical F .05	R Squared
GLM ANOVA main-effects model	G3	studytime, school, sex	649	954.269339	5808.997225	6763.266564	5	643	190.853868	9.03421	21.125684	0.0	2.228039	0.141096

Source	SS	df	MS	F	P Value	Partial Eta Squared	Decision	alpha .05
studytime	248.869357	3	82.956452	9.182480	5.902828e-06	0.041082	Reject H0	
school	458.123765	1	458.123765	50.709885	2.875367e-12	0.073100	Reject H0	
sex	66.428899	1	66.428899	7.353039	6.873866e-03	0.011306	Reject H0	

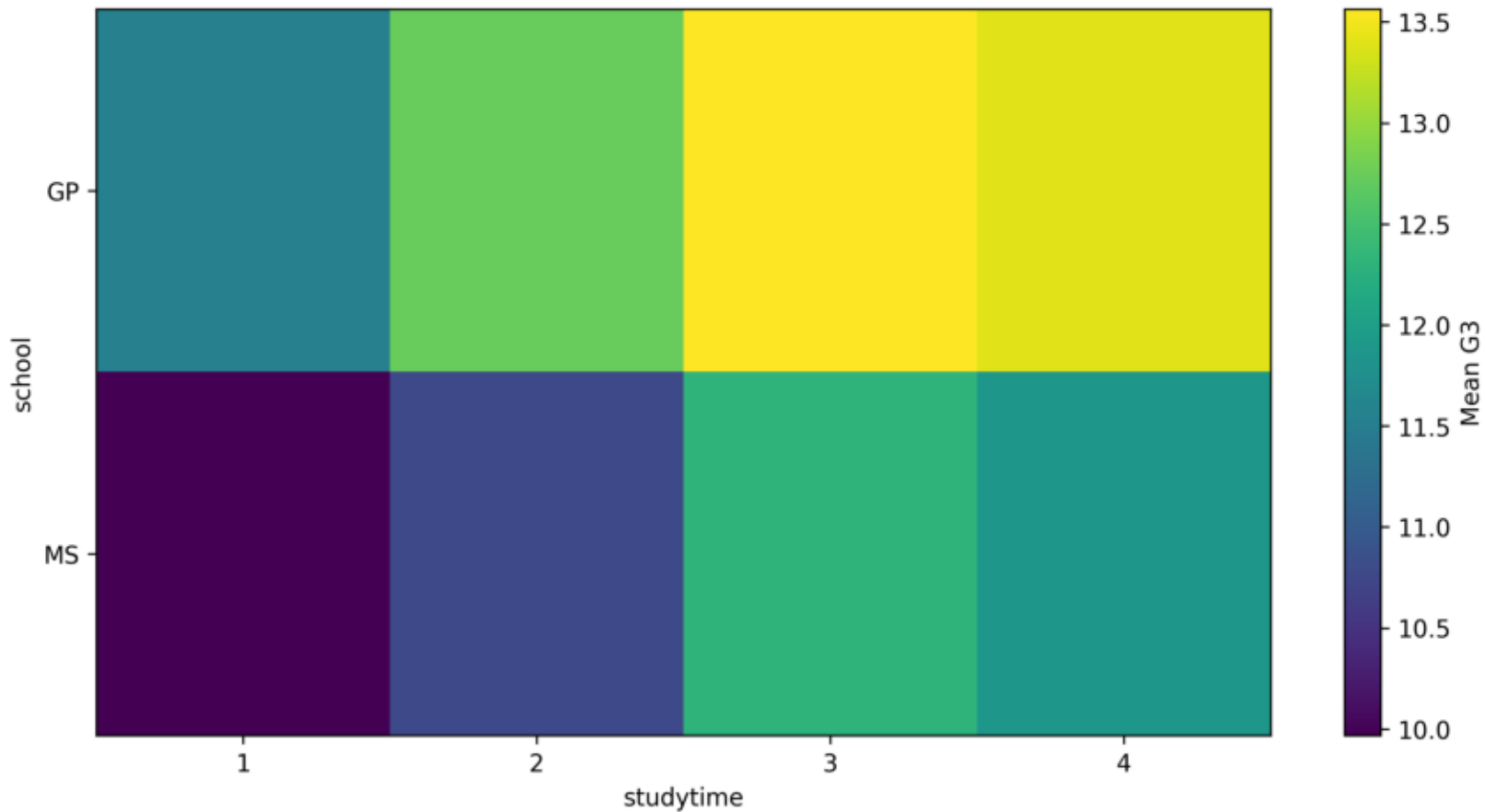
GLM ANOVA: Group Means with 95% Confidence Intervals

Observed means of G3 by studytime.



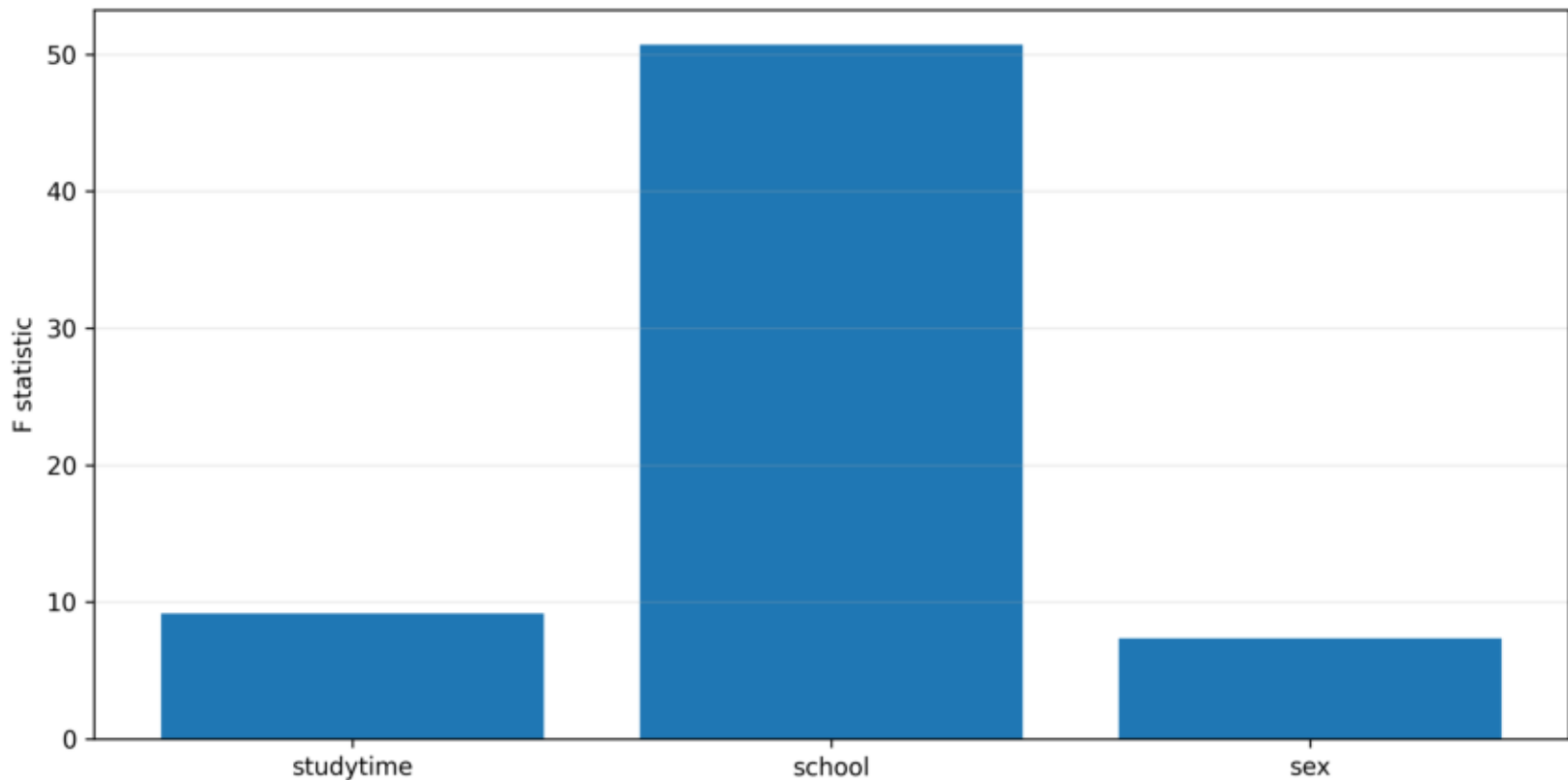
GLM ANOVA: Cell Means Heatmap

Mean G3 for school by studytime cells.



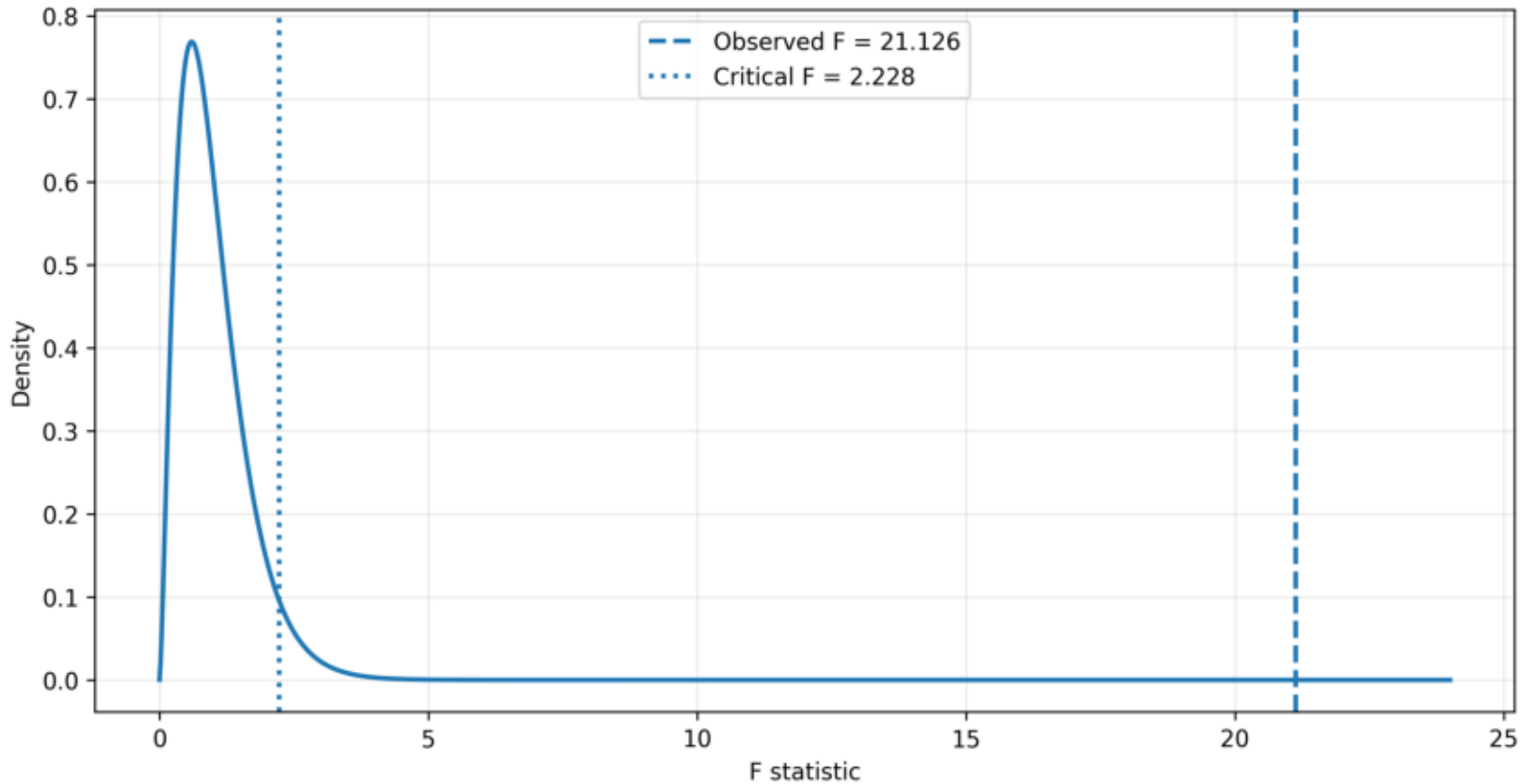
GLM ANOVA: F Statistics by Fixed Factor

Higher F values show stronger factor evidence after controlling for other factors.



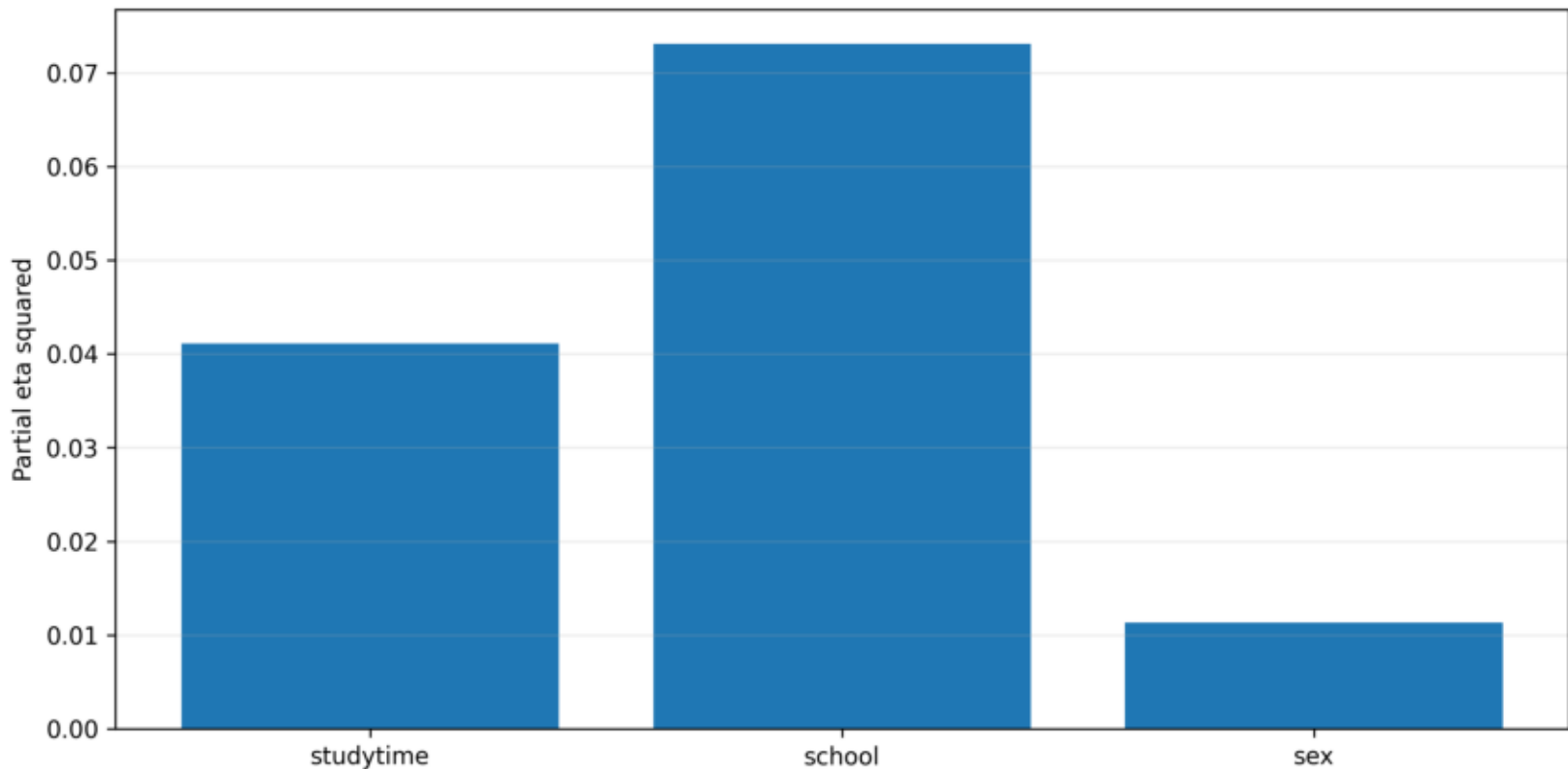
GLM ANOVA: Global F Distribution

Right-tail p-value = 0; df1 = 5, df2 = 643.



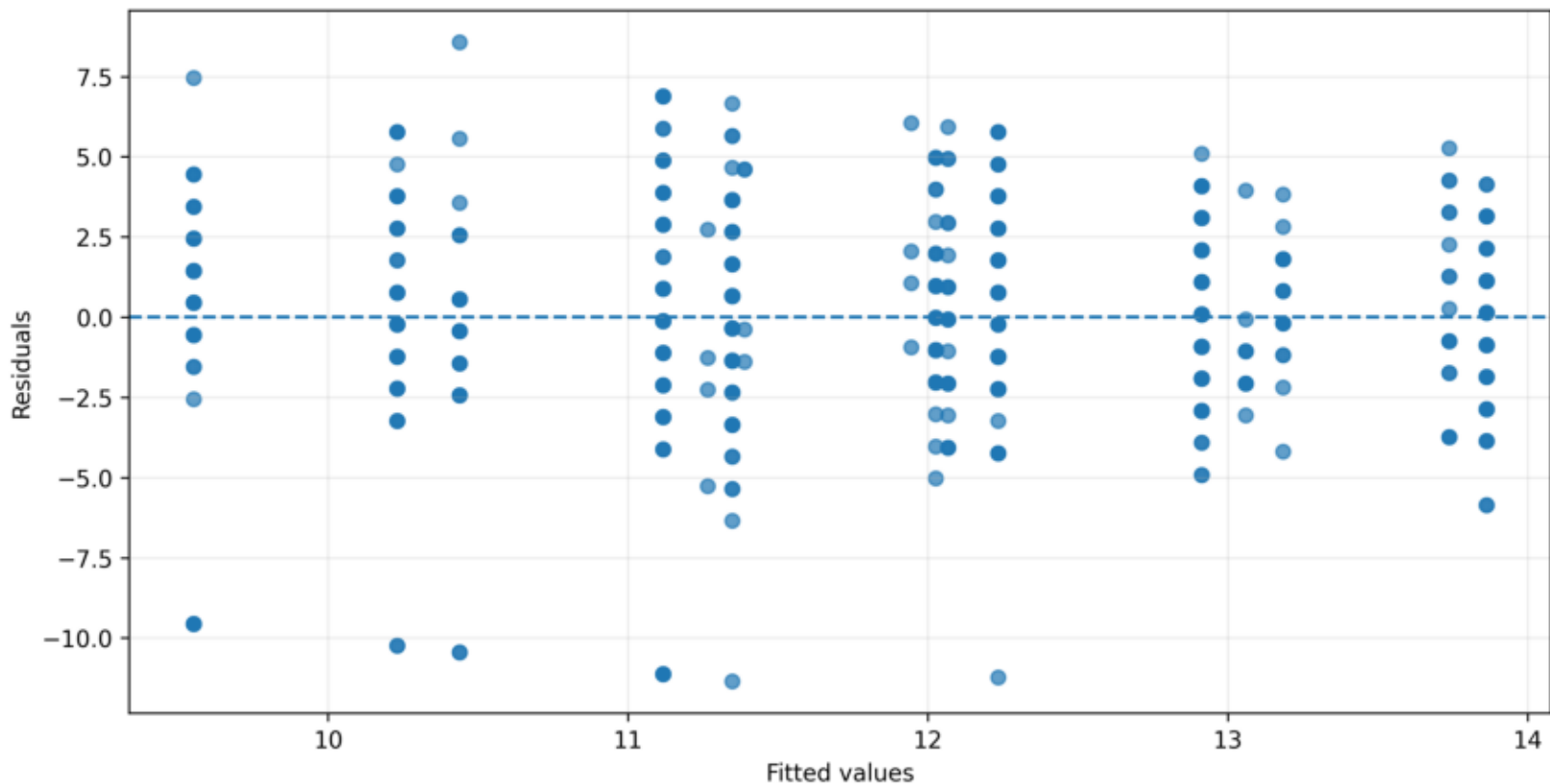
GLM ANOVA: Partial Eta Squared by Fixed Factor

Effect-size comparison for the fixed factors in the GLM.



GLM ANOVA: Residuals vs Fitted Values

A random pattern around zero supports model adequacy.



GLM ANOVA: Observed vs Fitted Values

Closer points to the diagonal indicate better model fit.

