

One Way ANOVA R Report

Outcome: G3
Factor: studytime

ANOVA result:

test_name	outcome	factor	n groups	df_between	df_within	
One Way ANOVA	G3	studytime	649	4	3	645
ss_between	ss_within	ms_between	ms_within	f_statistic	p_value	
465.0778	6298.189	155.0259	9.764634	15.87627	5.705728e-10	
critical_f_0_05	eta_squared	partial_eta_squared	omega_squared			
2.618715	0.06876527	0.06876527	0.06434105			
epsilon_squared	cohen_f	alpha	decision_alpha_0_05			
0.06443394	0.2717409	0.05	Reject equal means			

Group summary:

group	n	mean	median	standard_deviation	variance	minimum
1	212	10.84434	11	3.218624	10.359541	0
2	305	12.09180	12	3.243125	10.517860	0
3	97	13.22680	13	2.502104	6.260524	8
4	35	13.05714	13	3.038410	9.231933	6
maximum	standard_error	ci95_low	ci95_high			
18	0.2210560	10.41107	11.27761			
19	0.1857008	11.72783	12.45578			
18	0.2540502	12.72887	13.72474			
19	0.5135850	12.05052	14.06377			

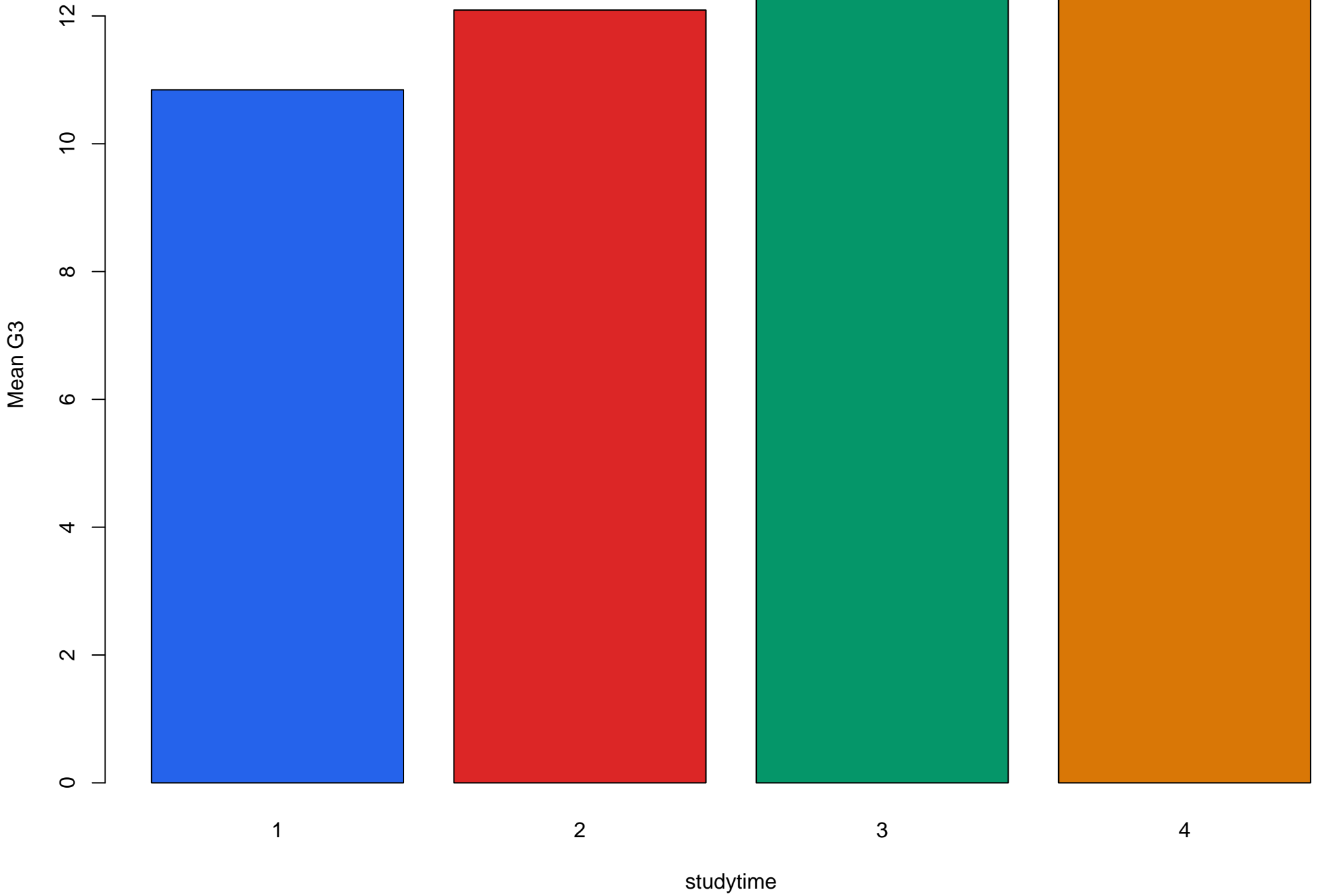
Assumption checks:

assumption	check_used
Independence	Study design review
Homogeneity of variance	Median-based Levene-style test
Residual normality	Residual histogram and Q-Q plot
statistic	p_value

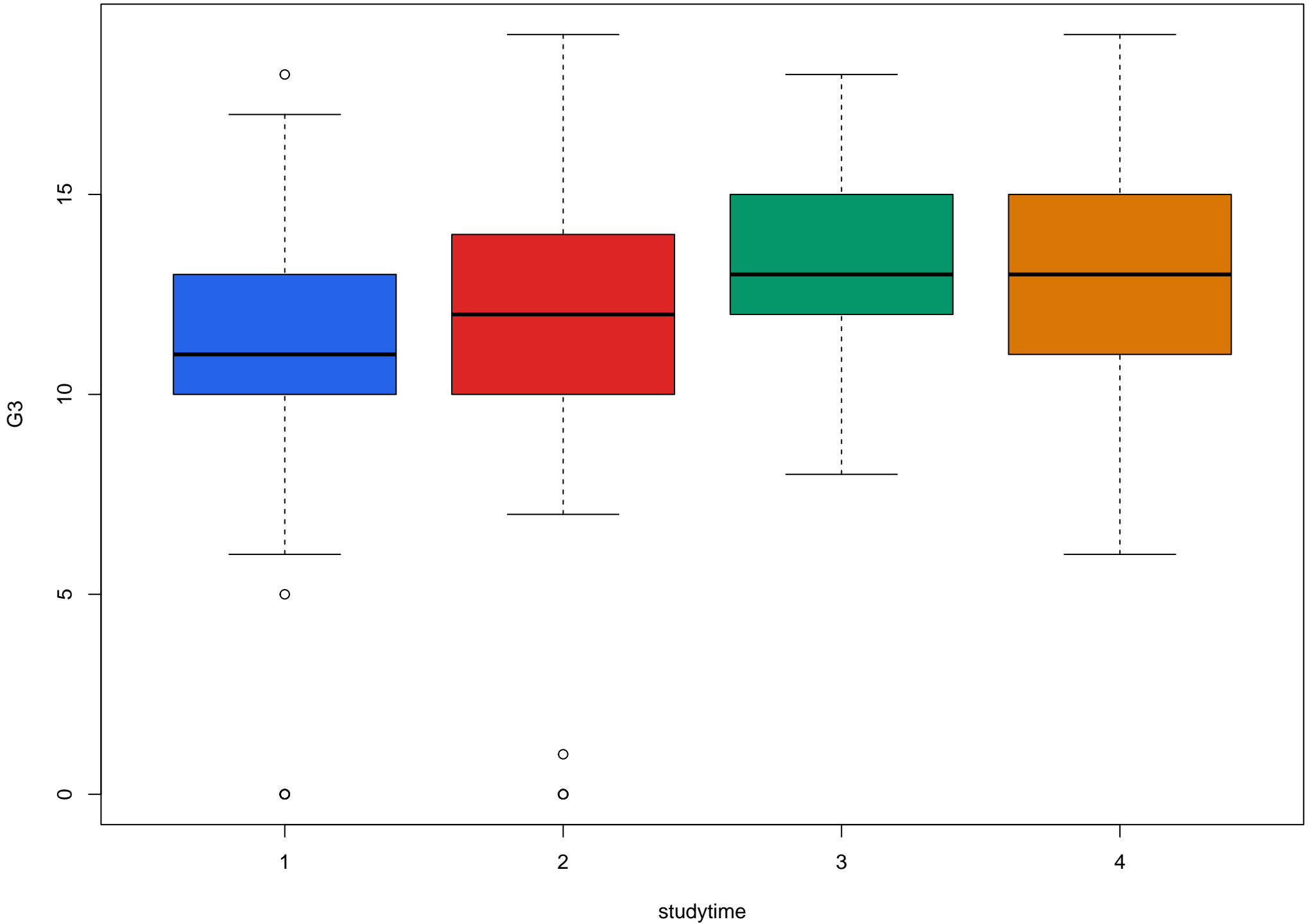
1.02631214962543 0.380357515907592

decision
Must be verified from sampling/design.
Supported if p >= .05
Use residual plots.

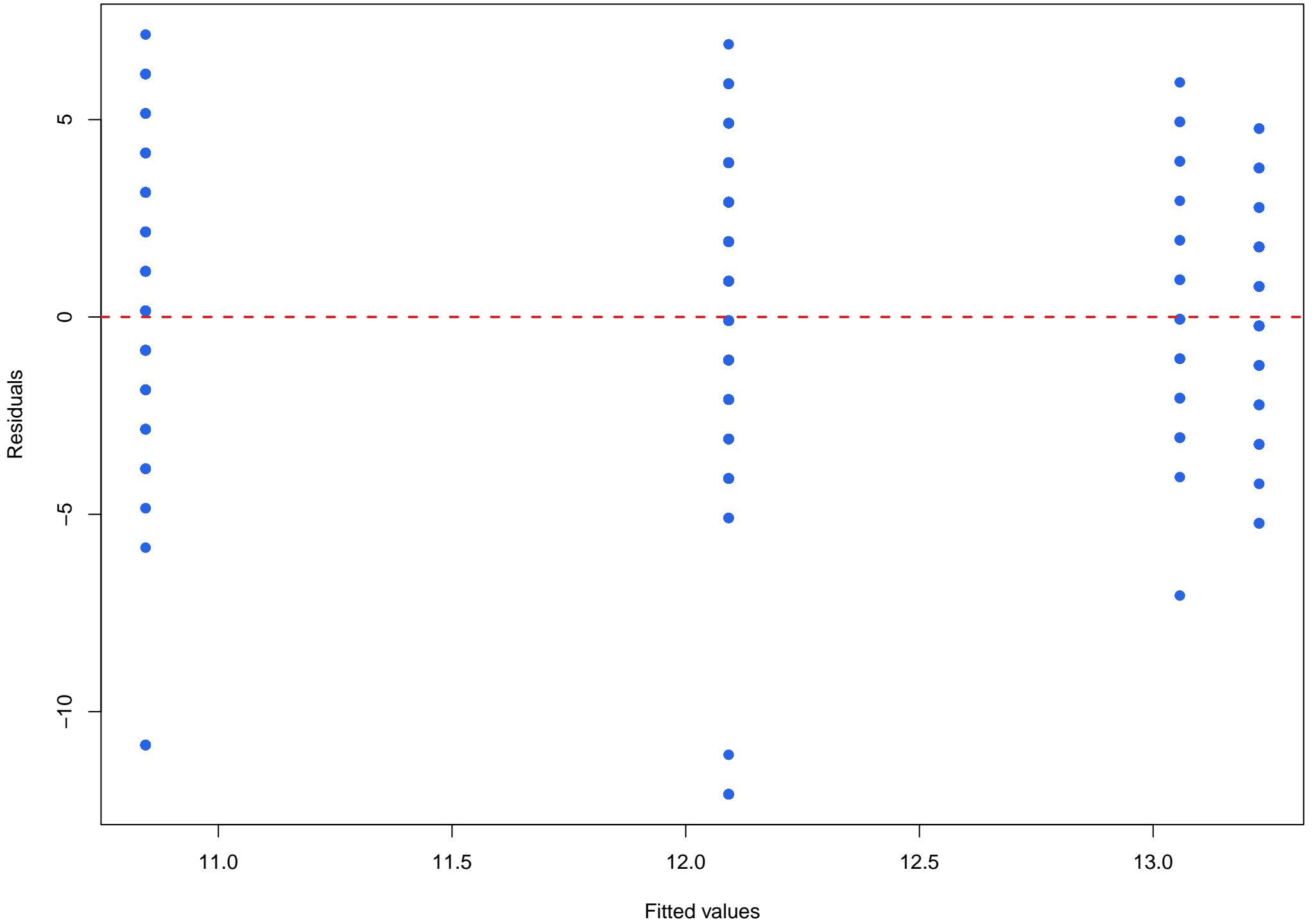
One Way ANOVA: Mean G3 by Studytime



One Way ANOVA: G3 Distribution by Group



One Way ANOVA: Residuals vs Fitted



One Way ANOVA: Q-Q Plot of Residuals

