

Dunnetts Test for Comparing Groups Against a Control

Dependent variable: G3
Group variable: studytime
Control group: 1

ANOVA table:

source	sum_of_squares	df	mean_square	f_value	p_value	eta_squared	omega_squared
Between groups	465.0778	3	155.025942	15.87627	5.705728e-10	0.06876527	0.06434105
Within groups	6298.1887	645	9.764634	NA	NA	NA	NA
Total	6763.2666	648	NA	NA	NA	NA	NA

Dunnett comparisons:

control_group	comparison_group	mean_control	mean_group	mean_difference_group_minus_control	test_statistic
1	2	10.84434	12.09180		1.247464
1	3	10.84434	13.22680		2.382465
1	4	10.84434	13.05714		2.212803
adjusted_p_value	confidence_level	ci_lower	ci_upper	decision_alpha_0_05	
2.841957e-05	0.95	0.5785479	1.916379	Significant vs control	
2.685879e-09	0.95	1.4654643	3.299465	Significant vs control	
3.438313e-04	0.95	0.8479357	3.577671	Significant vs control	

method_note

Fallback: pooled t comparisons vs control with Sidak-adjusted p-values because multcomp was unavailable
Fallback: pooled t comparisons vs control with Sidak-adjusted p-values because multcomp was unavailable
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Assumption context:

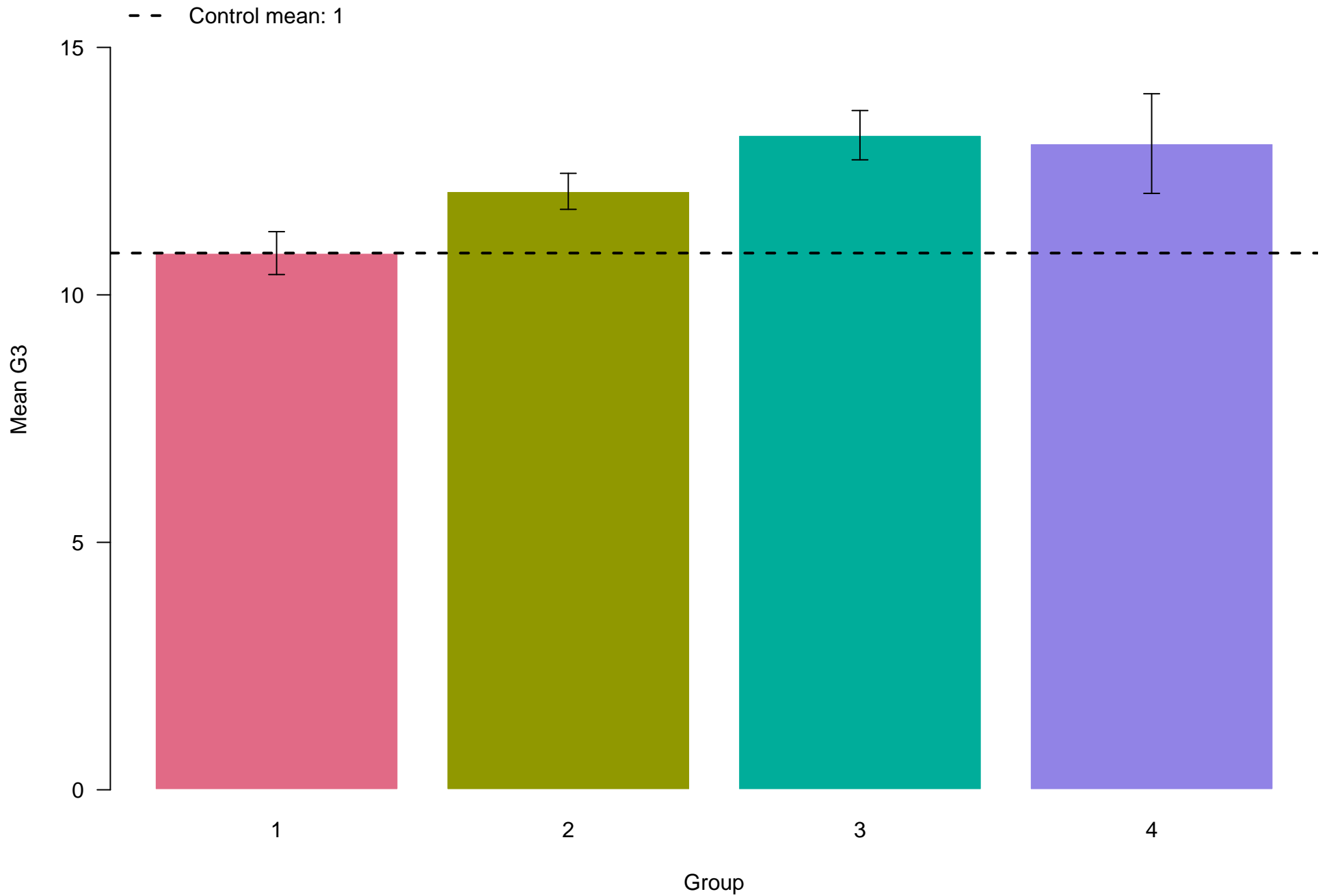
context	statistic	p_value
Brown-Forsythe / median-centered Levene context	1.026312	0.3803575

note

Dunnetts Test is ANOVA-based; check normality and variance assumptions before reporting the result.

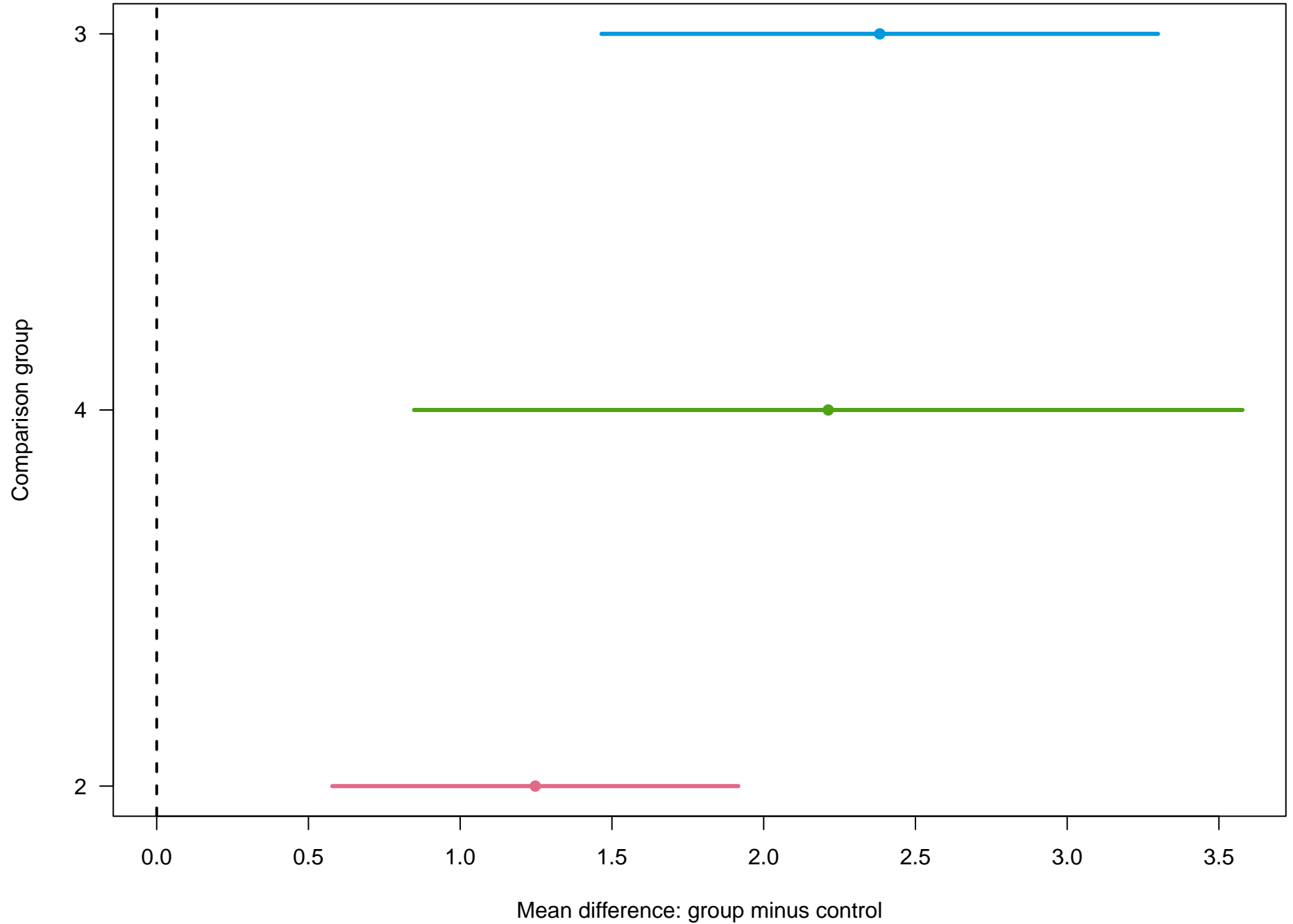
Dunnetts Test: Colorful Group Means vs Control

Each group is compared only with the selected control group.



Dunnetts Test: Colorful Mean Differences with Adjusted CIs

A confidence interval crossing zero suggests the group is not different from the control.



Dunnetts Test: Colorful Adjusted p-value Decision

Groups below alpha are significantly different from the control.

3

2

4

0.00000

0.00005

0.00010

0.00015

0.00020

0.00025

0.00030

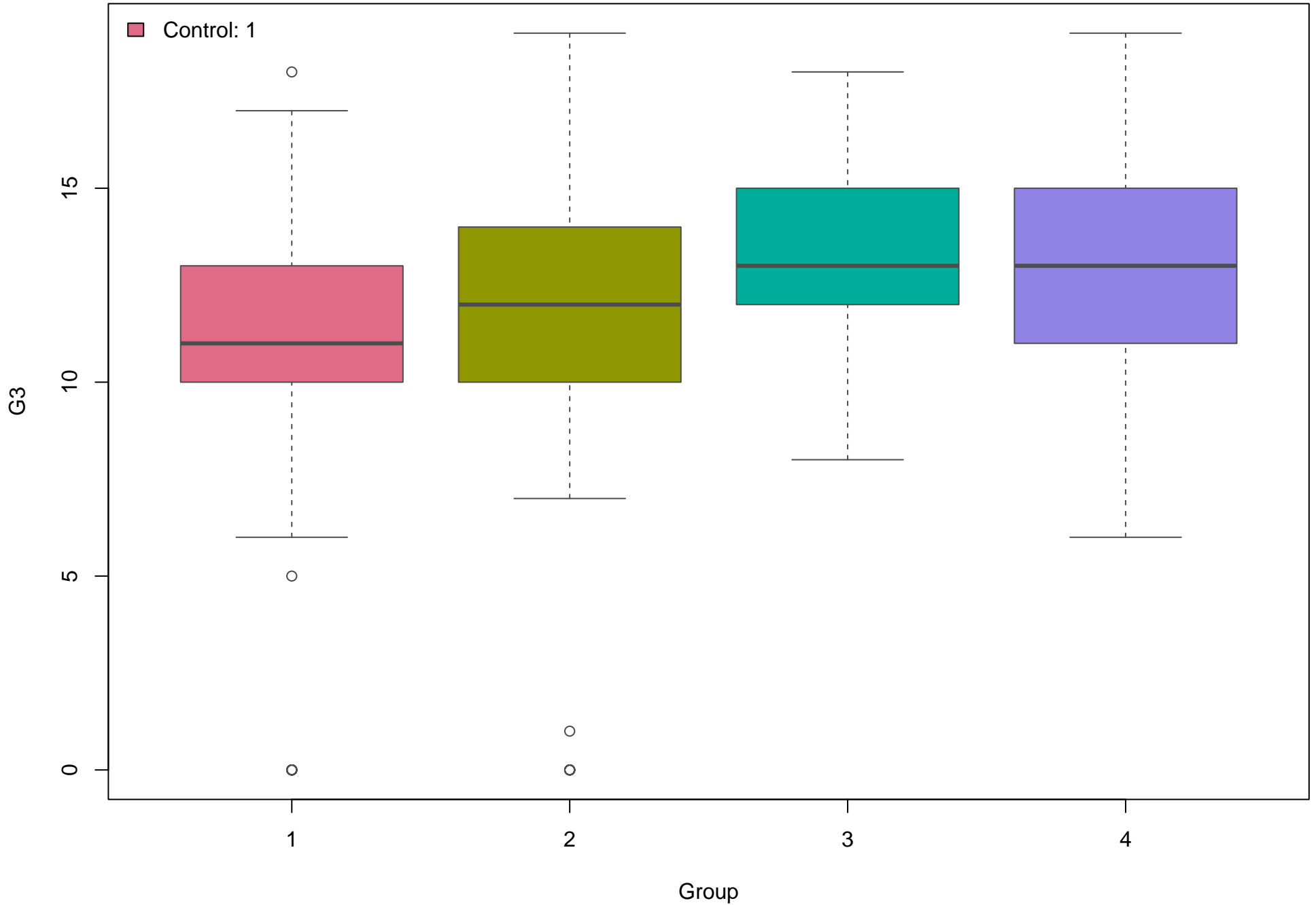
Adjusted p-value

-- alpha = 0.05



Dunnetts Test: Colorful Distribution by Group

Boxplots show spread and outliers before comparing groups against the control.



Dunnetts Test: Colorful Group Size and Mean

Sample size affects the precision of each comparison against the control.

