

# Random Effects ANOVA R Report

Outcome: G3  
Random factor: studytime

## Results:

```
test_name outcome random_factor n random_levels
Random Effects ANOVA G3 studytime 649 4
df_between df_within ss_between ss_within ms_between ms_within
3 645 465.0778 6298.189 155.0259 9.764634
f_statistic p_value critical_f_0_05 unbalanced_effective_n0
15.87627 5.705728e-10 2.618715 140.0092
variance_component_between variance_component_error icc
1.037512 9.764634 0.09604687
alpha decision_alpha_0_05
0.05 Reject H0: random-level variance is greater than zero
```

## ANOVA table:

Source	SS	df	MS	F
Random factor: studytime	465.0778	3	155.025942	15.87627
Error / Within Groups	6298.1887	645	9.764634	NA
Total	6763.2666	648	NA	NA

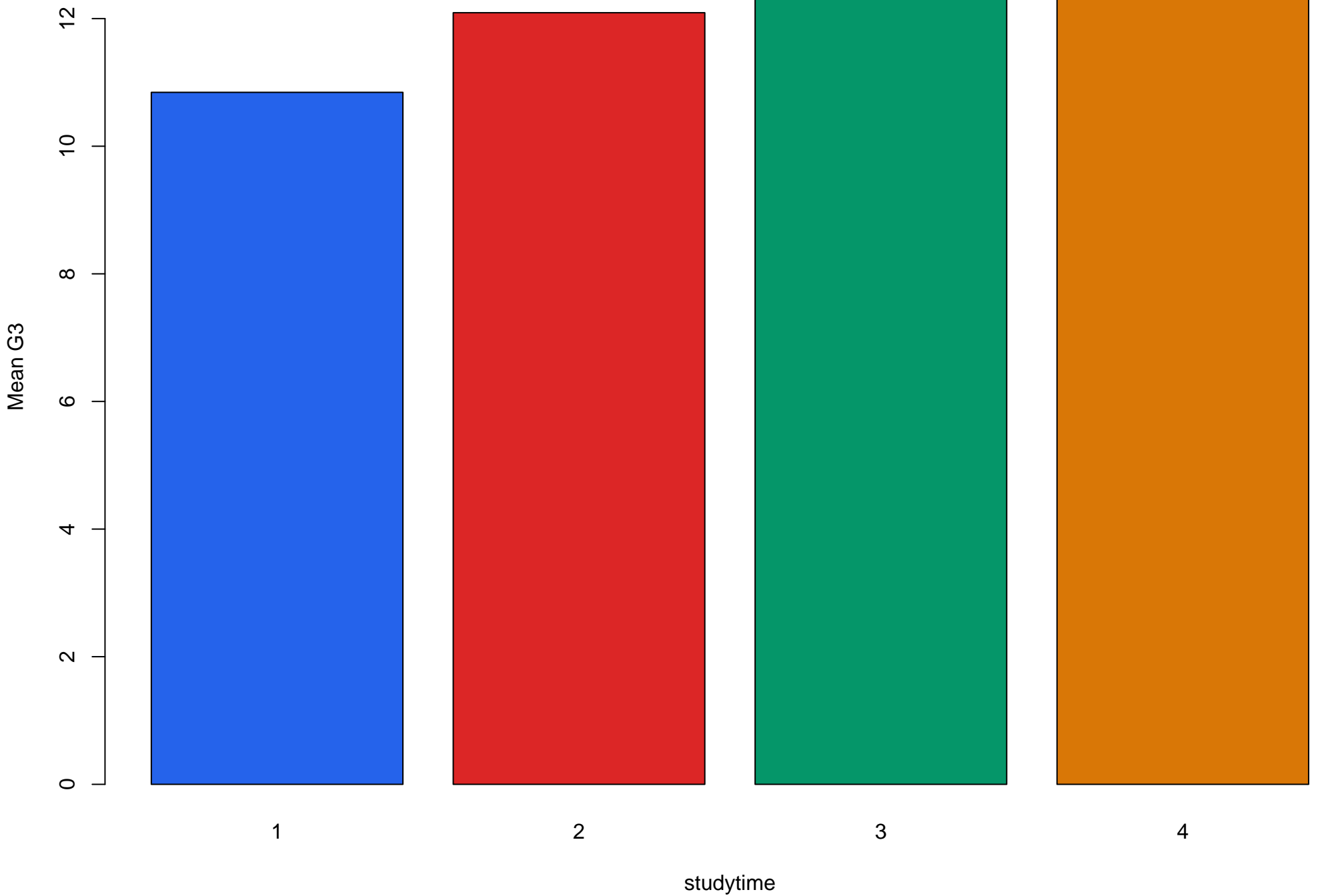
P\_Value Critical\_F\_05  
5.705728e-10 2.618715  
NA NA  
NA NA

## Variance components:

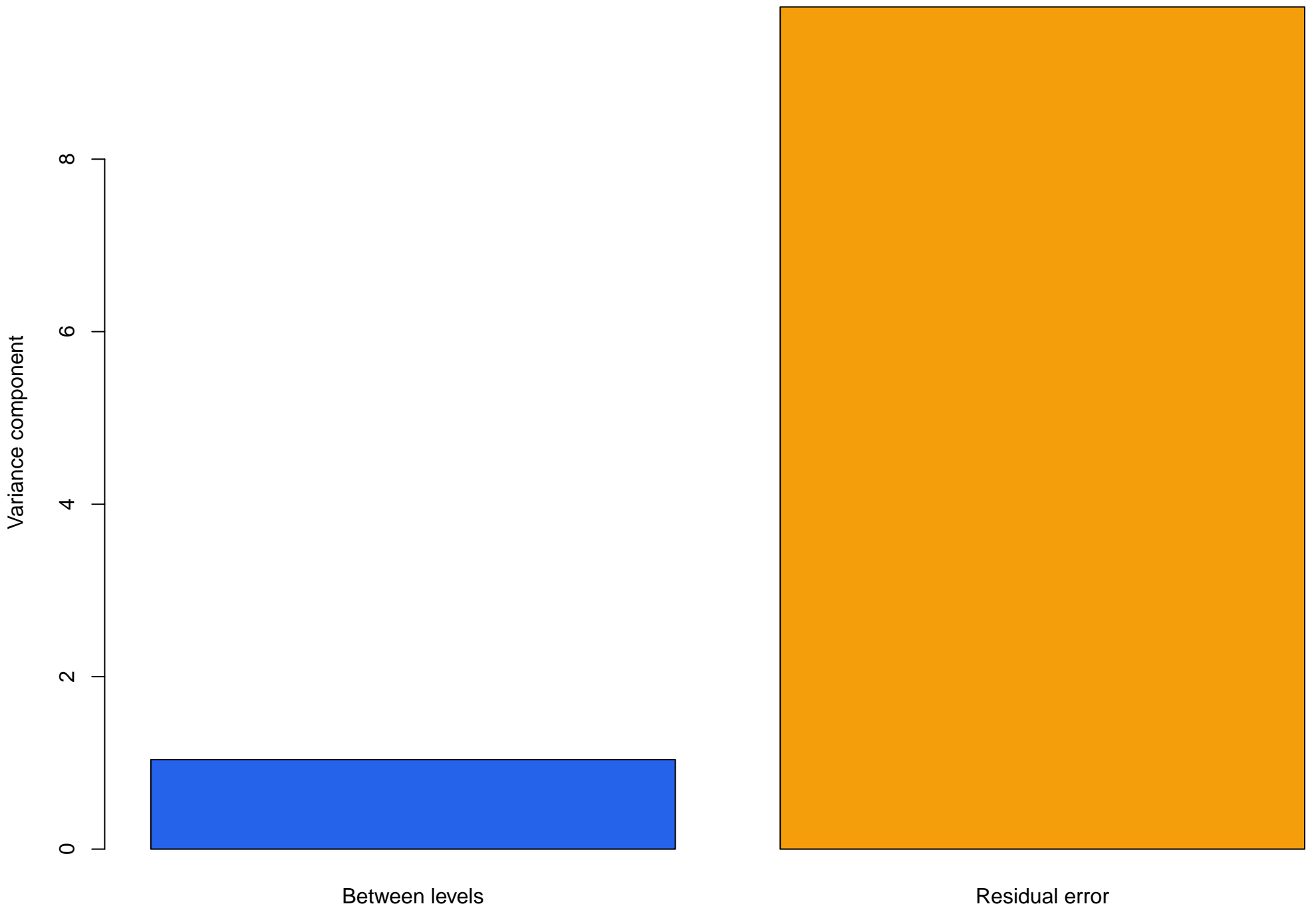
Component	Variance_Component
Between random levels: studytime	1.037512
Within-level / residual error	9.764634
Total	10.802146

Percent\_of\_Total\_Variance  
9.604687  
90.395313  
100.000000

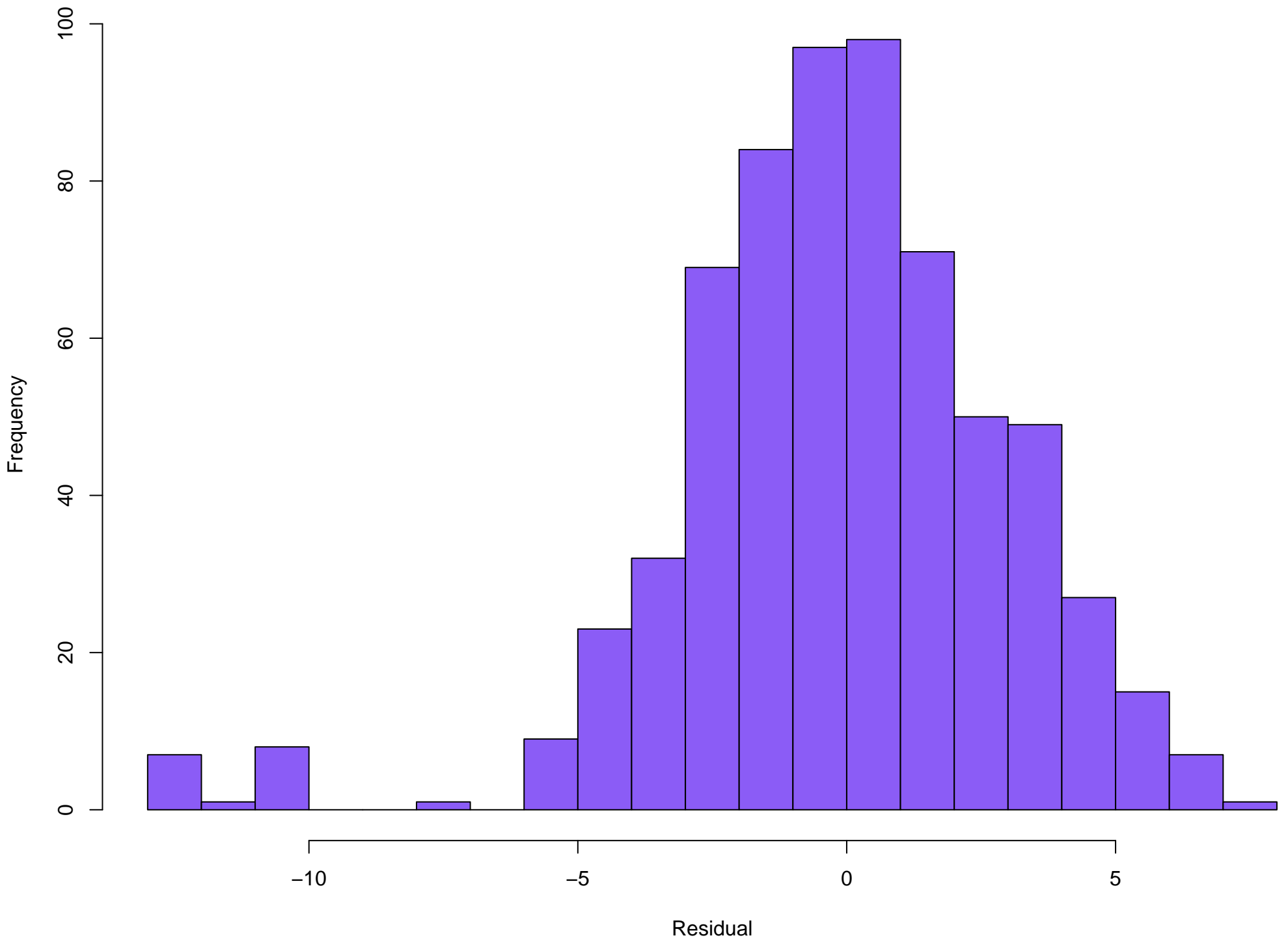
### Random Effects ANOVA: Random-Level Means



# Random Effects ANOVA: Variance Components



Random Effects ANOVA: Residual Histogram



Random Effects ANOVA: Q-Q Plot of Residuals

