

Advanced Psychological Statistics  
PSYCH-UA.11  
Department of Psychology  
Spring 2022

Data Assignment 6

One-way ANOVA –

a) What is the F value for the ANOVA? (6 pts)

**F = 64.22 (This may vary if the data is created rather than imported)**

b) Is it statistically significant? (6 pts). At what level (what p value)? (6 pts)

**Yes, this is statistically significant,  $p < 2e-16$  (This may vary if the data is created rather than imported)**

c) What are the between group and within group degrees of freedom? (6pts)

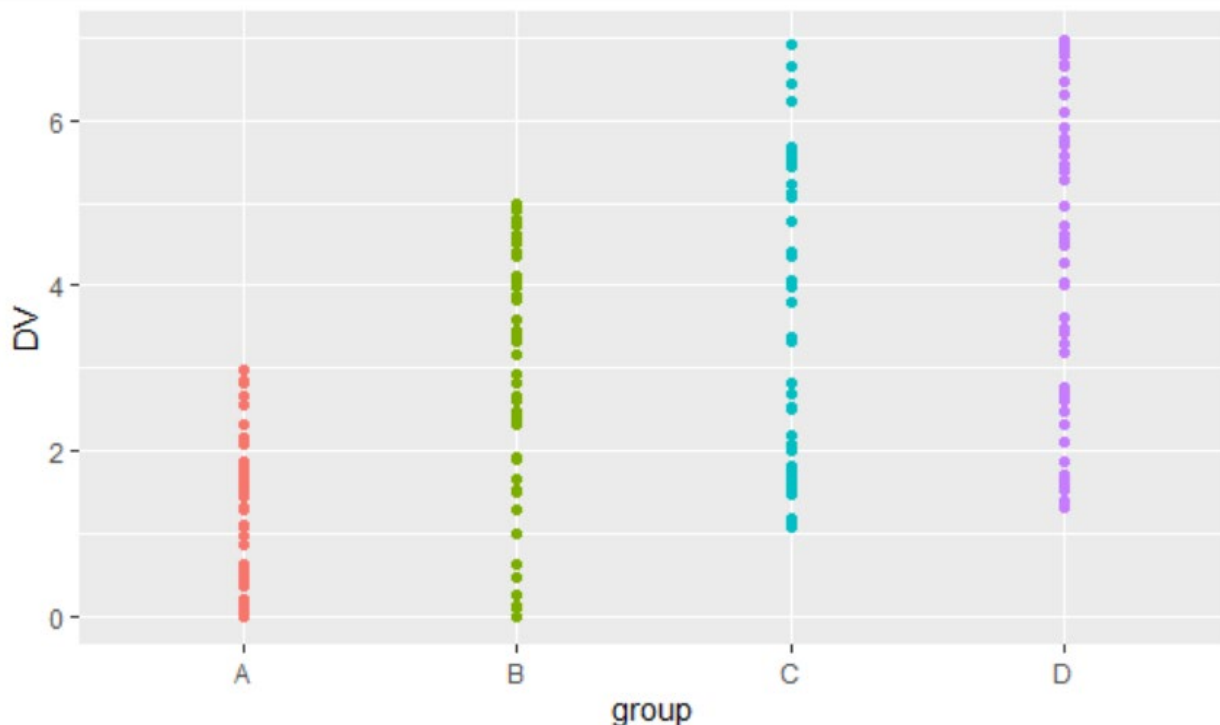
**df = 3, 196**

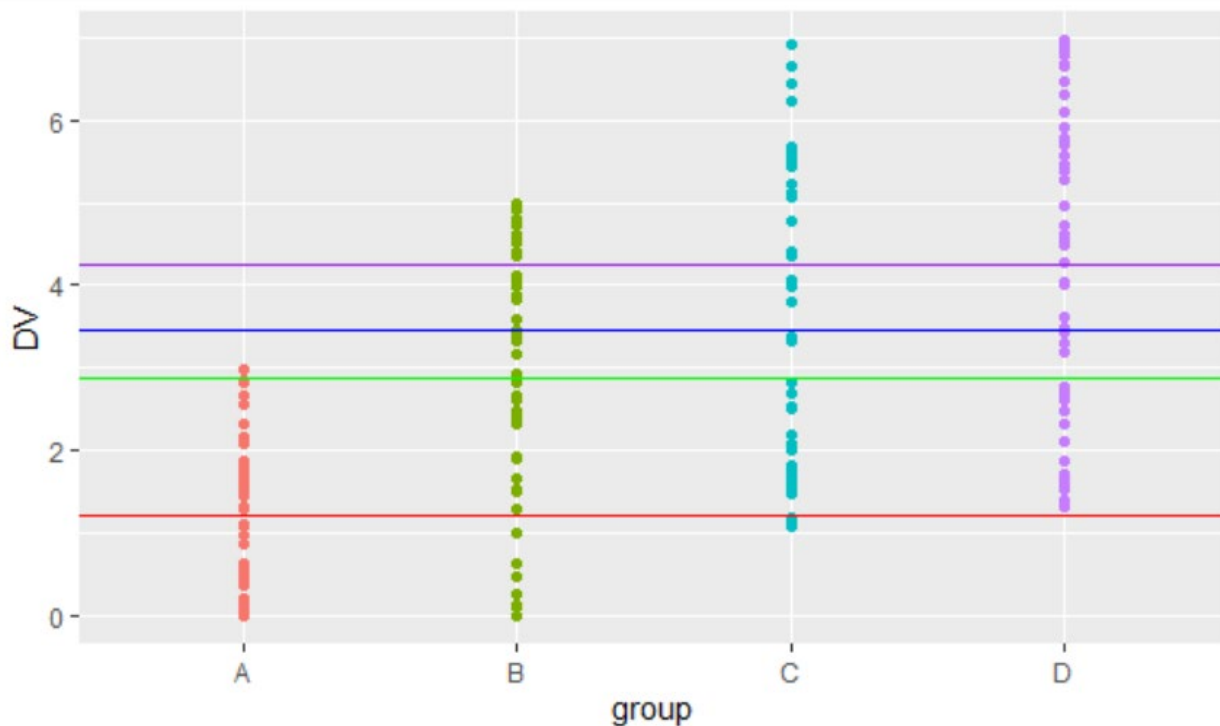
d) What are the total degrees of freedom? (5 pts)

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e) Interpret the graph (either one). What can you say about the different group data? (5pts.)

**The groups have different scores and different means. It supports the statistically significant ANOVA**





## 24 Two-way ANOVA

- a) What are the three F values? (6 pts).

**F = 169.169 (IV1)**

**F = 3.323 (IV2)**

**F = 5.853 (interaction)**

**(This may vary if the data is created rather than imported)**

- b) Which F values are statistically significant? (6 pts). At what level (what p value)? (6 pts)

**The Fs for IV1 and the interaction are statistically significant. (This may vary if the data is created rather than imported)**

- c) What are the degrees of freedom for the two independent variables and the interaction? (6pts)

**Each are 1 (This may vary if the data is created rather than imported – dfs = 2, 1, 2)**

- d) What are the total degrees of freedom? (5 pts)

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**(This may vary if the data is created rather than imported  $df_{total} = 179$ )**

- e) Interpret the graph (either one). What can you say about the different independent variables (as indicated by the plots)? (5pts.)

There is a large difference in IV (and not IV2) and the plots are not parallel support the interaction effect.

