

Exercise 5 Single – Factor Experiments

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DATASET

data Eye_FocusTime;

input Distance \$ Subject \$ Eye_Focustime;

cards;

dist4 subj1 10

dist4 subj2 6

dist4 subj3 6

dist4 subj4 6

dist4 subj5 6

dist6 subj1 8

dist6 subj2 6

dist6 subj3 6

dist6 subj4 1

dist6 subj5 6

dist8 subj1 5

dist8 subj2 3

dist8 subj3 3

dist8 subj4 2

dist8 subj5 2

dist10 subj1 7

dist10 subj2 4

dist10 subj3 4

dist10 subj4 2

dist10 subj5 3

;

PROC PRINT DATA=Eye_FocusTime ;

TITLE 'The Effect Object Distance on Eye Focus Time Using A
Randomized Block Experiment' ;

RUN ;

proc glm plots=(diagnostics);

class Distance Subject;

model Eye_Focustime=Distance Subject;

means Distance Subject / duncan;

quit;

The Effect Object Distance on Eye Focus Time Using A Randomized Block Experiment

Obs	Distance	Subject	Eye_Focustime
1	dist4	subj1	10
2	dist4	subj2	6
3	dist4	subj3	6
4	dist4	subj4	6
5	dist4	subj5	6
6	dist6	subj1	8
7	dist6	subj2	6
8	dist6	subj3	6
9	dist6	subj4	1
10	dist6	subj5	6
11	dist8	subj1	5
12	dist8	subj2	3
13	dist8	subj3	3
14	dist8	subj4	2
15	dist8	subj5	2
16	dist10	subj1	7
17	dist10	subj2	4
18	dist10	subj3	4
19	dist10	subj4	2
20	dist10	subj5	3

The Effect Object Distance on Eye Focus Time Using A Randomized Block Experiment

The GLM Procedure

Class Level Information		
Class	Levels	Values
Distance	4	dist10 dist4 dist6 dist8
Subject	5	subj1 subj2 subj3 subj4 subj5

Number of Observations Read	20
Number of Observations Used	20

The Effect Object Distance on Eye Focus Time Using A Randomized Block Experiment

The GLM Procedure

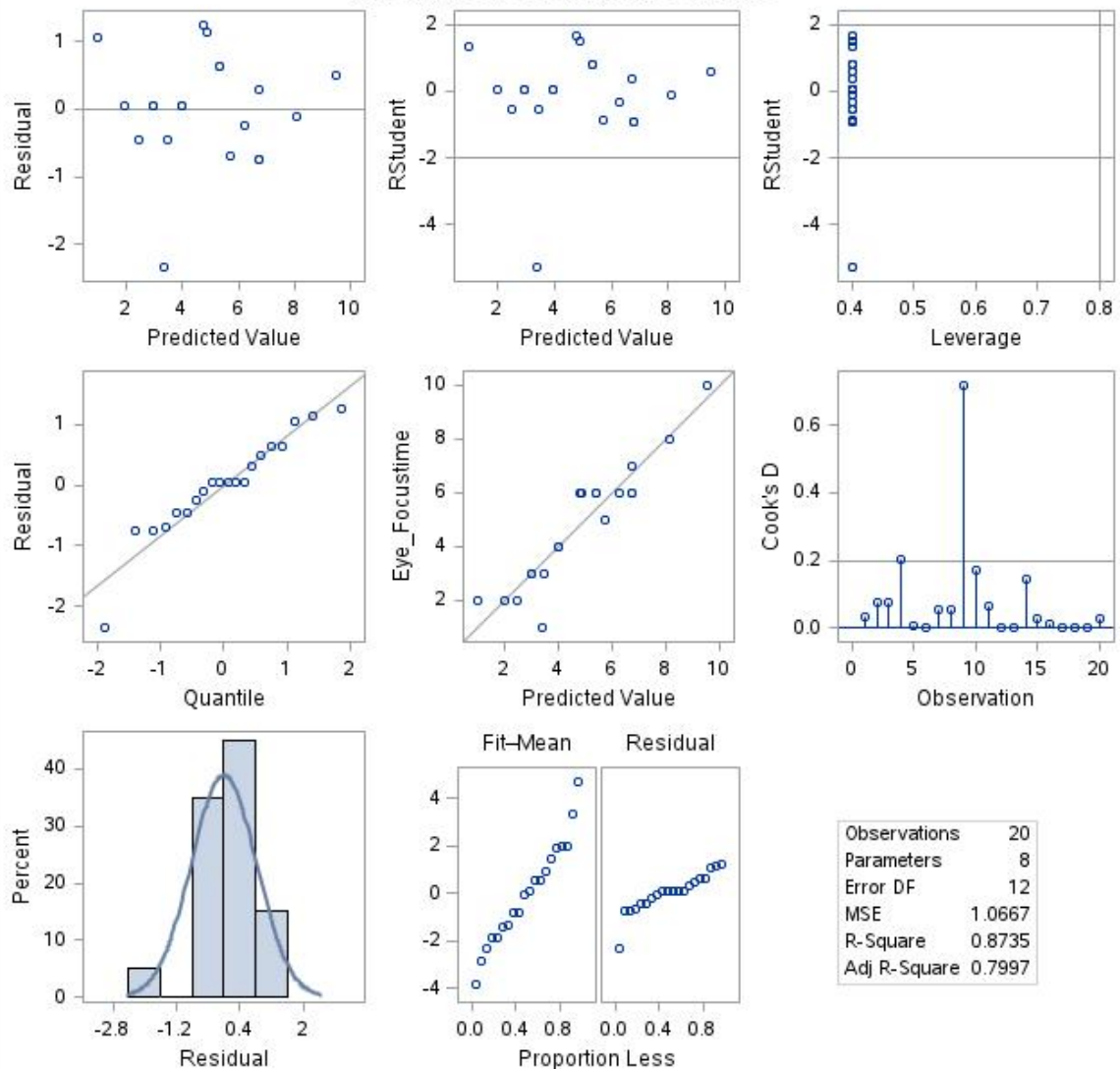
Dependent Variable: Eye_Focustime

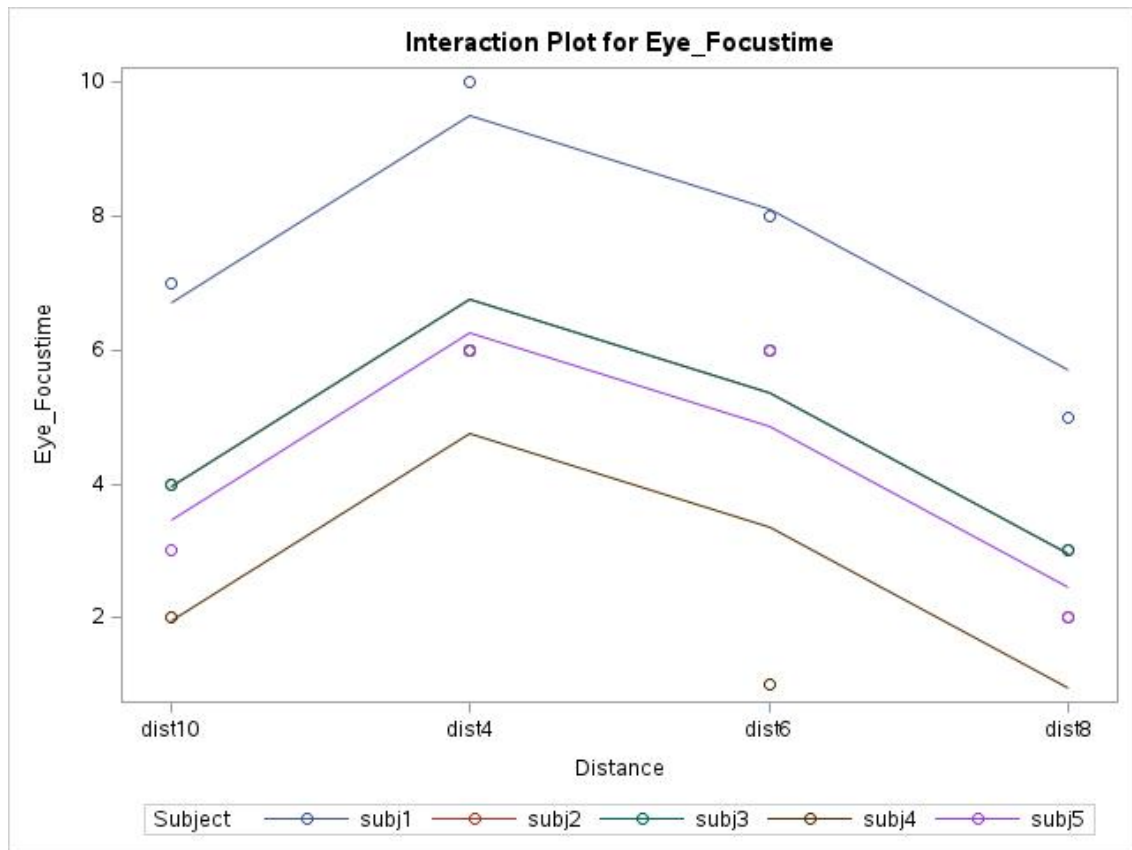
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	88.4000000	12.6285714	11.84	0.0002
Error	12	12.8000000	1.0666667		
Corrected Total	19	101.2000000			

R-Square	Coeff Var	Root MSE	Eye_Focustime Mean
0.873518	21.51657	1.032796	4.800000

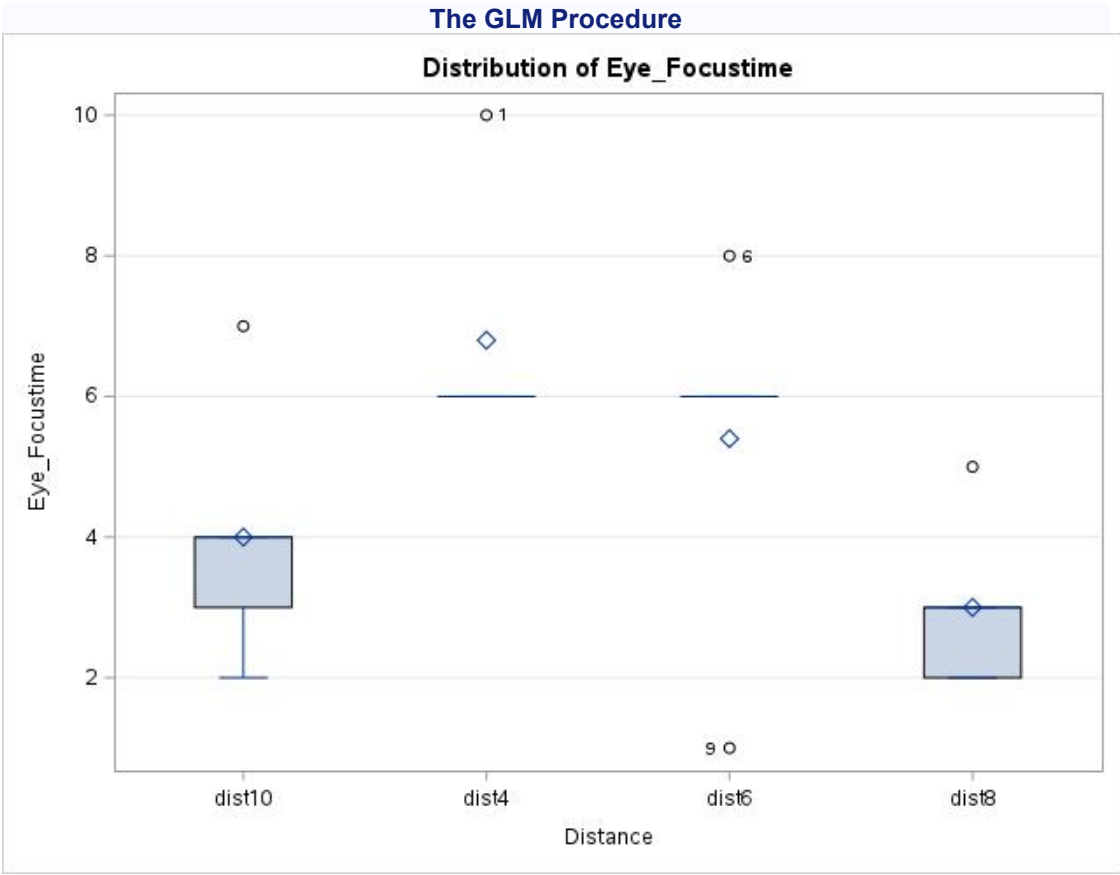
Source	DF	Type I SS	Mean Square	F Value	Pr > F
Distance	3	41.20000000	13.73333333	12.88	0.0005
Subject	4	47.20000000	11.80000000	11.06	0.0005
Source	DF	Type III SS	Mean Square	F Value	Pr > F
Distance	3	41.20000000	13.73333333	12.88	0.0005
Subject	4	47.20000000	11.80000000	11.06	0.0005

Fit Diagnostics for Eye_Focustime





The Effect Object Distance on Eye Focus Time Using A Randomized Block Experiment



The Effect Object Distance on Eye Focus Time Using A Randomized Block Experiment

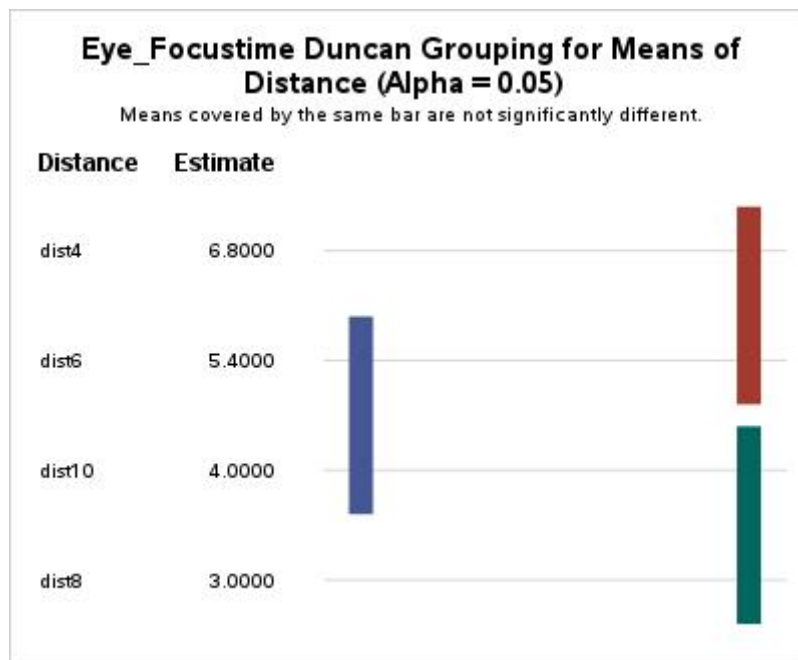
The GLM Procedure

Duncan's Multiple Range Test for Eye_Focustime

Note: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

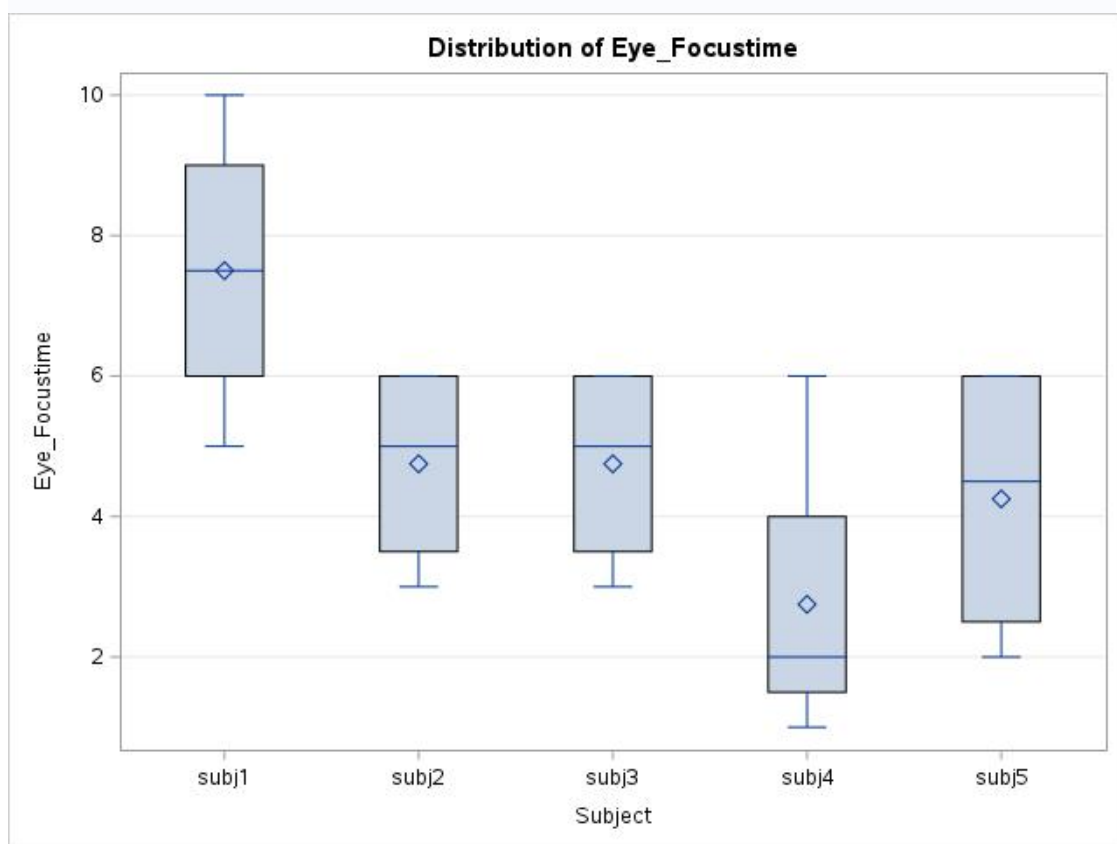
Alpha	0.05
Error Degrees of Freedom	12
Error Mean Square	1.066667

Number of Means	2	3	4
Critical Range	1.423	1.490	1.530



The Effect Object Distance on Eye Focus Time Using A Randomized Block Experiment

The GLM Procedure



The Effect Object Distance on Eye Focus Time Using A Randomized Block Experiment

The GLM Procedure

Duncan's Multiple Range Test for Eye_Focustime

Note: This test controls the Type I comparisonwise error rate, not the experimentwise error rate.

Alpha	0.05
Error Degrees of Freedom	12
Error Mean Square	1.066667

Number of Means	2	3	4	5
Critical Range	1.591	1.666	1.711	1.740

