Chapter 10

**Repeated measures two-way ANOVA**

The behavior of prisoners with known drug abuse problems is monitored; averaged ratings are on a scale of 1 to 10, 1 being particularly disruptive and 10 the most well-behaved. The two factors under consideration are whether or not the prisoners are in lockdown, and whether or not they are offered a drug substitute.

Perform a repeated measures two-way ANOVA in JASP to analyze the individual and interaction effects of lockdown and the provision of a substitute drug. Use the Repeated-measures two-way ANOVA csv file.

|  |  |  |  |
| --- | --- | --- | --- |
| LockdownSubstance | LockdownSubstance | NolockdownSubstance | NolockdownNosubstance |
| 6 | 5 | 9 | 7 |
| 9 | 6 | 6 | 4 |
| 5 | 3 | 8 | 5 |
| 6 | 2 | 5 | 5 |
| 6 | 5 | 9 | 6 |
| 3 | 3 | 7 | 5 |
| 9 | 6 | 7 | 5 |
| 4 | 2 | 4 | 3 |
| 8 | 5 | 6 | 5 |
| 7 | 2 | 8 | 4 |

**Between-Subjects ANOVA**

Members of the public are asked how safe they feel from crimes of violence. The results are broken down according to social class and environs. Class: 1 = poor, 2 = working class, 3 = middle class, 4 = upper middle/upper class. Environs: 1 = urban, 2 = suburban, 3 = rural

The results are as follows (in the Between Subjects ANOVA csv file):

|  |  |  |
| --- | --- | --- |
| Perceived safety | Class | Environs |
| 109 | 1 | 1 |
| 110 | 1 | 1 |
| 110 | 1 | 2 |
| 112 | 1 | 2 |
| 116 | 1 | 3 |
| 114 | 1 | 3 |
| 110 | 2 | 1 |
| 115 | 2 | 1 |
| 110 | 2 | 2 |
| 111 | 2 | 2 |
| 112 | 2 | 3 |
| 115 | 2 | 3 |
| 108 | 3 | 1 |
| 109 | 3 | 1 |
| 111 | 3 | 2 |
| 109 | 3 | 2 |
| 114 | 3 | 3 |
| 119 | 3 | 3 |
| 110 | 4 | 1 |
| 108 | 4 | 1 |
| 114 | 4 | 2 |
| 112 | 4 | 2 |
| 120 | 4 | 3 |
| 117 | 4 | 3 |

Test to see if there is a difference in the safety perception scores according to the factors considered.

**Mixed ANOVA**

In this (completely imaginary) study, Judges are asked to rate the quality of the arguments presented by the lawyers prosecuting and defending defendants; the evidence of several cases is averaged in order to eradicate factors such as time. Of particular importance is thought to be the level of the court: lay members are at level 1; professional judges in lower courts are at level 2; senior courts are level 1.

|  |  |  |  |
| --- | --- | --- | --- |
| Judge | Court level | Defence | Prosecution |
| 1 | 3 | 23 | 24 |
| 2 | 3 | 24 | 23 |
| 3 | 3 | 25 | 28 |
| 4 | 2 | 30 | 38 |
| 5 | 2 | 28 | 36 |
| 6 | 2 | 26 | 35 |
| 7 | 1 | 31 | 34 |
| 8 | 1 | 32 | 36 |
| 9 | 1 | 29 | 39 |

Conduct a mixed ANOVA with JASP, using the Mixed ANOVA csv file, and identify which factors are associated with judicial credibility.