# Results : Sensitivity (d-prime) (corrected: 05.09.22)

## Repeated Measures ANOVA

Within Subjects Effects

| | Sum of Squares | df | Mean Square | F | p | $\eta^2_p$ |
|---|---|---|---|---|---|---|
| Probe Type | 0.0235 | 1 | 0.0235 | 0.0303 | 0.864 | 0.002 |
| Probe Type ✳ YesKey | 0.5251 | 1 | 0.5251 | 0.6759 | 0.421 | 0.034 |
| Residual | 14.7599 | 19 | 0.7768 | | | |
| Compatibility | 75.1080 | 1 | 75.1080 | 90.3579 | <.001 | 0.826 |
| Compatibility ✳ YesKey | 0.5946 | 1 | 0.5946 | 0.7153 | 0.408 | 0.036 |
| Residual | 15.7933 | 19 | 0.8312 | | | |
| Presentation Time | 76.3404 | 5 | 15.2681 | 54.0781 | <.001 | 0.740 |
| Presentation Time ✳ YesKey | 2.0348 | 5 | 0.4070 | 1.4414 | 0.217 | 0.071 |
| Residual | 26.8217 | 95 | 0.2823 | | | |
| Probe Type ✳ Compatibility | 64.7497 | 1 | 64.7497 | 88.2133 | <.001 | 0.823 |
| Probe Type ✳ Compatibility ✳ YesKey | 0.0131 | 1 | 0.0131 | 0.0179 | 0.895 | 0.001 |
| Residual | 13.9462 | 19 | 0.7340 | | | |
| Probe Type ✳ Presentation Time | 6.8393 | 5 | 1.3679 | 3.3666 | 0.008 | 0.151 |
| Probe Type ✳ Presentation Time ✳ YesKey | 2.1348 | 5 | 0.4270 | 1.0508 | 0.393 | 0.052 |
| Residual | 38.5988 | 95 | 0.4063 | | | |
| Compatibility ✳ Presentation Time | 24.2632 | 5 | 4.8526 | 12.8629 | <.001 | 0.404 |
| Compatibility ✳ Presentation Time ✳ YesKey | 0.3158 | 5 | 0.0632 | 0.1674 | 0.974 | 0.009 |
| Residual | 35.8395 | 95 | 0.3773 | | | |
| Probe Type ✳ Compatibility ✳ Presentation Time | 11.9651 | 5 | 2.3930 | 6.4409 | <.001 | 0.253 |
| Probe Type ✳ Compatibility ✳ Presentation Time ✳ YesKey | 1.2894 | 5 | 0.2579 | 0.6941 | 0.629 | 0.035 |
| Residual | 35.2962 | 95 | 0.3715 | | | |

*Note.* Type 3 Sums of Squares

[3]

Between Subjects Effects

| | Sum of Squares | df | Mean Square | F | p | $\eta^2_p$ |
|---|---|---|---|---|---|---|
| YesKey | 3.08 | 1 | 3.08 | 1.14 | 0.300 | 0.056 |
| Residual | 51.46 | 19 | 2.71 | | | |

*Note.* Type 3 Sums of Squares

## Assumptions

Tests of Sphericity

| | Mauchly's W | p | Greenhouse-Geisser ε | Huynh-Feldt ε |
|---|---|---|---|---|
| Probe Type | 1.000 | NaN [a] | 1.000 | 1.000 |
| Compatibility | 1.000 | NaN [a] | 1.000 | 1.000 |
| Presentation Time | 0.593 | 0.837 | 0.820 | 1.000 |
| Probe Type ✻ Compatibility | 1.000 | NaN [a] | 1.000 | 1.000 |
| Probe Type ✻ Presentation Time | 0.519 | 0.674 | 0.816 | 1.000 |
| Compatibility ✻ Presentation Time | 0.368 | 0.257 | 0.782 | 1.000 |
| Probe Type ✻ Compatibility ✻ Presentation Time | 0.507 | 0.642 | 0.775 | 0.999 |

[a] The repeated measures has only two levels. The assumption of sphericity is always met when the repeated measures has only two levels.

# Repeated Measures ANOVA

**Action** probes

Within Subjects Effects

| | Sum of Squares | df | Mean Square | F | p | $\eta^2_p$ |
|---|---|---|---|---|---|---|
| Presentation Time | 59.116 | 5 | 11.823 | 30.916 | <.001 | 0.619 |
| Presentation Time ✻ YesKey | 2.477 | 5 | 0.495 | 1.295 | 0.273 | 0.064 |
| Residual | 36.331 | 95 | 0.382 | | | |
| Compatibility | 0.192 | 1 | 0.192 | 1.480 | 0.239 | 0.072 |
| Compatibility ✻ YesKey | 0.216 | 1 | 0.216 | 1.661 | 0.213 | 0.080 |
| Residual | 2.466 | 19 | 0.130 | | | |
| Presentation Time ✻ Compatibility | 3.306 | 5 | 0.661 | 1.827 | 0.115 | 0.088 |
| Presentation Time ✻ Compatibility ✻ YesKey | 1.341 | 5 | 0.268 | 0.741 | 0.594 | 0.038 |
| Residual | 34.374 | 95 | 0.362 | | | |

*Note.* Type 3 Sums of Squares

**[3]**

Between Subjects Effects

| | Sum of Squares | df | Mean Square | F | p | $\eta^2_p$ |
|---|---|---|---|---|---|---|
| YesKey | 3.07 | 1 | 3.07 | 1.65 | 0.215 | 0.080 |
| Residual | 35.44 | 19 | 1.87 | | | |

*Note.* Type 3 Sums of Squares

# Repeated Measures ANOVA

**Scene** probes

Within Subjects Effects

|  | Sum of Squares | df | Mean Square | F | p | $\eta^2_p$ |
|---|---|---|---|---|---|---|
| Presentation Time | 24.063 | 5 | 4.8127 | 15.717 | < .001 | 0.453 |
| Presentation Time ✱ YesKey | 1.693 | 5 | 0.3386 | 1.106 | 0.363 | 0.055 |
| Residual | 29.090 | 95 | 0.3062 |  |  |  |
| Compatibility | 139.666 | 1 | 139.6656 | 97.298 | < .001 | 0.837 |
| Compatibility ✱ YesKey | 0.392 | 1 | 0.3921 | 0.273 | 0.607 | 0.014 |
| Residual | 27.273 | 19 | 1.4354 |  |  |  |
| Presentation Time ✱ Compatibility | 32.923 | 5 | 6.5845 | 17.016 | < .001 | 0.472 |
| Presentation Time ✱ Compatibility ✱ YesKey | 0.264 | 5 | 0.0528 | 0.136 | 0.983 | 0.007 |
| Residual | 36.762 | 95 | 0.3870 |  |  |  |

*Note.* Type 3 Sums of Squares

**[3]**

Between Subjects Effects

|  | Sum of Squares | df | Mean Square | F | p | $\eta^2_p$ |
|---|---|---|---|---|---|---|
| YesKey | 0.531 | 1 | 0.531 | 0.328 | 0.574 | 0.017 |
| Residual | 30.782 | 19 | 1.620 |  |  |  |

*Note.* Type 3 Sums of Squares

# References

**[1]** The jamovi project (2022). *jamovi*. (Version 2.3) [Computer Software]. Retrieved from https://www.jamovi.org.

**[2]** R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2022-01-01).

**[3]** Singmann, H. (2018). *afex: Analysis of Factorial Experiments*. [R package]. Retrieved from https://cran.r-project.org/package=afex.