# Results

## ANOVA

ANOVA - meaningfulness

| Homogeneity Correction | Cases | Sum of Squares | df | Mean Square | F | p | η² |
|---|---|---|---|---|---|---|---|
| None | stim_type | 60.432 | 3.000 | 20.144 | 18.828 | < .001 | 0.118 |
| | Residuals | 450.434 | 421.000 | 1.070 | | | |
| Brown-Forsythe | stim_type | 60.432 | 3.000 | 20.144 | 18.142 | < .001 | 0.118 |
| | Residuals | 450.434 | 338.639 | 1.330 | | | |
| Welch | stim_type | 60.432 | 3.000 | 20.144 | 17.930 | < .001 | 0.118 |
| | Residuals | 450.434 | 219.794 | 2.049 | | | |

*Note.* Type III Sum of Squares

The F-statistic is significant (p<.001) and there is a large effect size. Therefore, there is a **significant difference** between the means of the 4 categories.

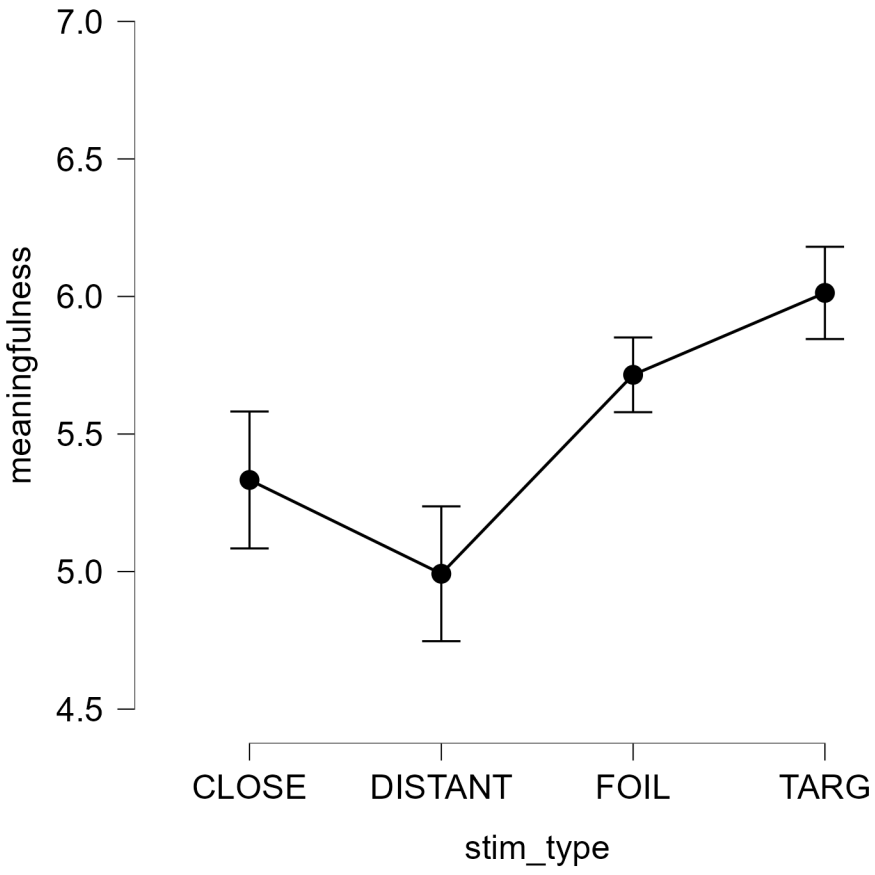
## Descriptives

Descriptives - meaningfulness

| stim_type | N | Mean | SD | SE | Coefficient of variation |
|---|---|---|---|---|---|
| CLOSE | 100 | 5.333 | 1.254 | 0.125 | 0.235 |
| DISTANT | 100 | 4.992 | 1.235 | 0.124 | 0.247 |
| FOIL | 125 | 5.715 | 0.767 | 0.069 | 0.134 |
| TARG | 100 | 6.013 | 0.845 | 0.085 | 0.141 |

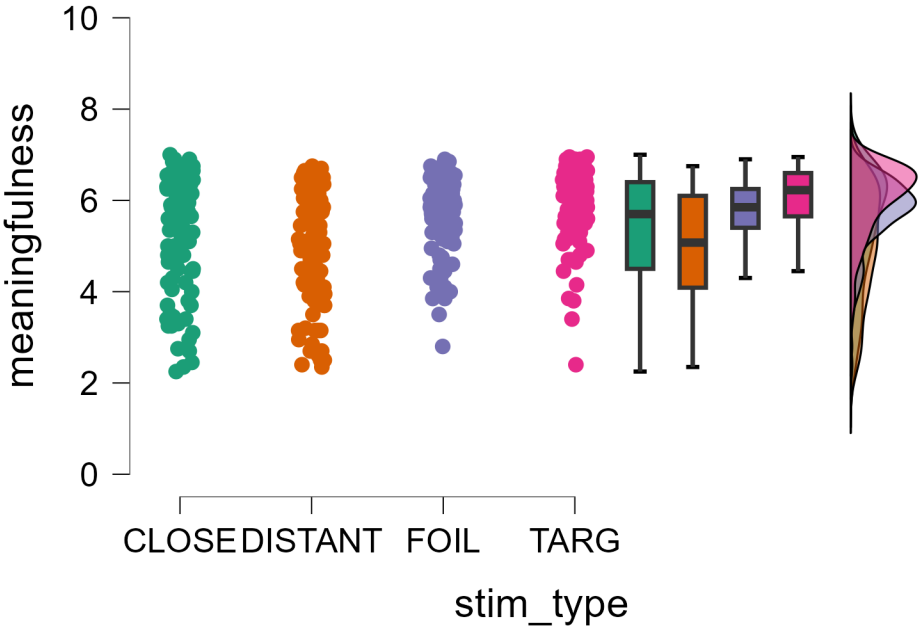
### Descriptives plots

**Targets and foils are significantly higher** in meaningfulness than close and distant lures. There's no difference between foils and targets or close and distant lures.



**Raincloud plots**

**meaningfulness**



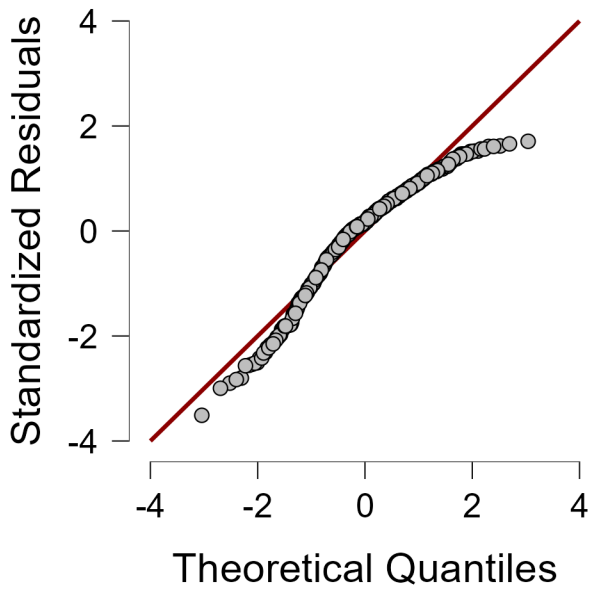
## Assumption Checks

Homogeneity of variance: Levene's test shows a **significant difference in variance**, so the Brown-Forsythe or Welch correction should be reported.

Test for Equality of Variances (Levene's)

| F | df1 | df2 | p |
|---|---|---|---|
| 17.798 | 3.000 | 421.000 | < .001 |

**Q-Q Plot**



## Post Hoc Tests

Post hoc testing shows that there is no significant difference between meaningfulness in close and distant lures, and foils and targets. However, It is **significantly higher in the target category** compared to the close lure category (p<.001) and the distant lure category (p<.001). **Foils are also significantly more meaningful** than close lures (p=.031) and distant lures (p<.001). Cohen's d shows that these differences have a large effect size.

### Standard

Post Hoc Comparisons - stim_type

| | | Mean Difference | SE | t | Cohen's d | $p_{tukey}$ |
|---|---|---|---|---|---|---|
| CLOSE | DISTANT | 0.341 | 0.146 | 2.331 | 0.330 | 0.093 |
| | FOIL | −0.382 | 0.139 | −2.754 | −0.370 | 0.031* |
| | TARG | −0.680 | 0.146 | −4.649 | −0.657 | < .001*** |
| DISTANT | FOIL | −0.723 | 0.139 | −5.211 | −0.699 | < .001*** |
| | TARG | −1.021 | 0.146 | −6.980 | −0.987 | < .001*** |
| FOIL | TARG | −0.298 | 0.139 | −2.146 | −0.288 | 0.140 |

* p < .05, *** p < .001

*Note.* P-value adjusted for comparing a family of 4