Results

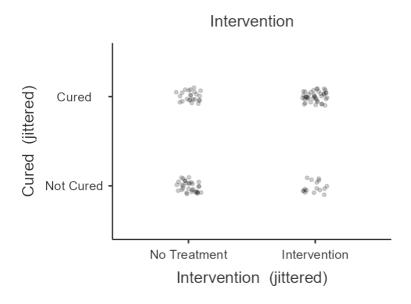
Relationships, Prediction, and Group Comparisons

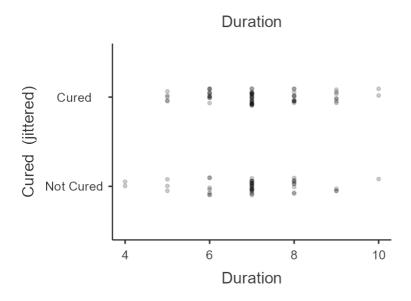
You have entered a dichotomous dependent variable and several independent variables. Hence, <u>logistic regression analysis</u> seems to be a good option for you! In order to run this analysis in jamovi, go to: Regression > 2 Outcomes - Binomial

- Drop your dependent variable in the box below Dependent Variable
- Drop your independent variables in the box below Covariates. Independent variables of nominal or ordinal measurement level that consist of more than two groups should be transformed into code variables before they are included in the analysis. Independent variables of nominal or ordinal measurement level that consist of two groups can be transformed into code variables, but they don't need to be, as long as numbers are used to indicate group membership, not letters (these dichotomous variables actually are code variables already, but you may like to change the coding). In jamovi, instead of transforming your categorical independent variables into code variables yourself, you can also put the untransformed categorical independent variables in the box below Factors. jamovi will then make the code variables for you 'behind the scenes'

Click on the link to learn more about this method!

Scatter Plots of Bivariate Relationships - Dependent/Independent Variables





Descriptives

Descriptives

| | Cured | Intervention |
|---------|-------|--------------|
| N | 113 | 113 |
| Missing | 0 | 0 |

Frequencies

Frequencies of Cured

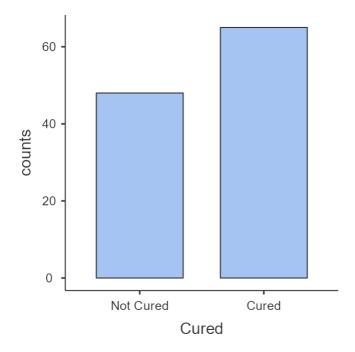
| Cured | Counts | % of Total | Cumulative % |
|-----------|--------|------------|--------------|
| Not Cured | 48 | 42.5 % | 42.5 % |
| Cured | 65 | 57.5 % | 100.0 % |

Frequencies of Intervention

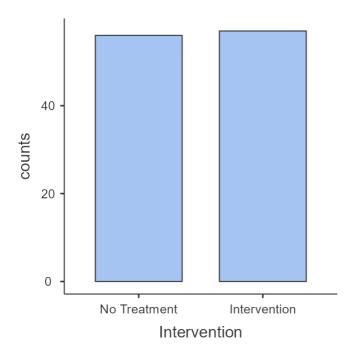
| Intervention | Counts | % of Total | Cumulative % |
|--------------|--------|------------|--------------|
| No Treatment | 56 | 49.6 % | 49.6 % |
| Intervention | 57 | 50.4 % | 100.0 % |

Plots

Cured



Intervention



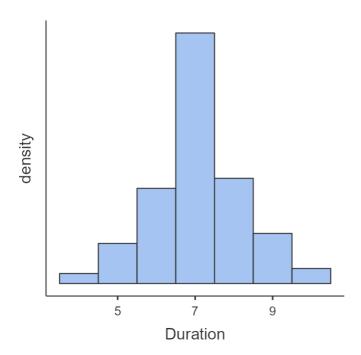
Descriptives

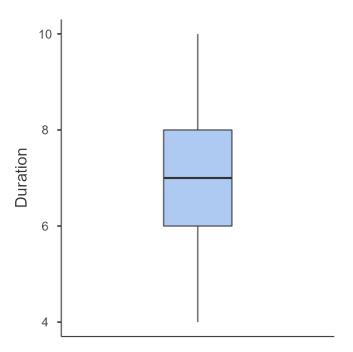
Descriptives

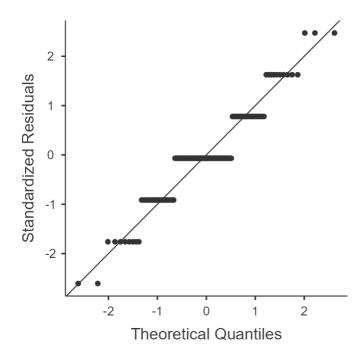
| | Duration |
|---------------------|----------|
| N | 113 |
| Missing | 0 |
| Mean | 7.08 |
| Median | 7.00 |
| Standard deviation | 1.18 |
| Minimum | 4.00 |
| Maximum | 10.0 |
| Skewness | 0.0419 |
| Std. error skewness | 0.227 |
| Shapiro-Wilk W | 0.925 |
| Shapiro-Wilk p | < .001 |

Plots

Duration







Binomial Logistic Regression

Model Fit Measures

| Model | Deviance | AIC | R ² McF |
|-------|----------|-----|--------------------|
| 1 | 151 | 159 | 0.0201 |

Model Coefficients - Cured

| Predictor | Estimate | SE | Z | р |
|-------------------------|----------|-------|-------|-------|
| Intercept | 17.5 | 16.4 | 1.07 | 0.286 |
| Duration | -97.2 | 69.6 | -1.40 | 0.163 |
| log_Duration | 167.2 | 119.3 | 1.40 | 0.161 |
| Duration * log_Duration | 24.8 | 17.8 | 1.40 | 0.163 |

Note. Estimates represent the log odds of "Cured = Cured" vs. "Cured = Not Cured"

Binomial Logistic Regression

Model Fit Measures

| | | | | | | Overall Model Test | | |
|-------|----------|-----|--------------------|-------------------|---------|--------------------|----|-------|
| Model | Deviance | AIC | R ² McF | R ² CS | R^2_N | χ² | df | р |
| 1 | 144 | 148 | 0.0644 | 0.0841 | 0.113 | 9.93 | 1 | 0.002 |
| 2 | 144 | 150 | 0.0644 | 0.0841 | 0.113 | 9.93 | 2 | 0.007 |

Model Comparisons

| Con | npai | rison | | | |
|-------|------|-------|---------|----|-------|
| Model | | Model | χ² | df | р |
| 1 | - | 2 | 0.00198 | 1 | 0.964 |

Model Specific ResultsModel 1Model 2

Omnibus Likelihood Ratio Tests

| Predictor | χ² | df | р |
|--------------|------|----|-------|
| Intervention | 9.93 | 1 | 0.002 |

[3]

Model Coefficients - Cured

| | | 95% Coi Inte | nfidence rval | _ | | | | | nfidence erval |
|--------------------------------|----------|-----------------|------------------|-------|-------|-------|---------------|-------|-------------------|
| Predictor | Estimate | Lower | Upper | SE | Z | р | Odds ratio | Lower | Upper |
| Intercept Intervention: | -0.288 | -0.817 | 0.242 | 0.270 | -1.07 | 0.287 | 0.750 | 0.442 | 1.27 |
| Intervention – No Treatment | 1.229 | 0.445 | 2.012 | 0.400 | 3.07 | 0.002 | 3.417 | 1.561 | 7.48 |

Note. Estimates represent the log odds of "Cured = Cured" vs. "Cured = Not Cured"

Assumption Checks

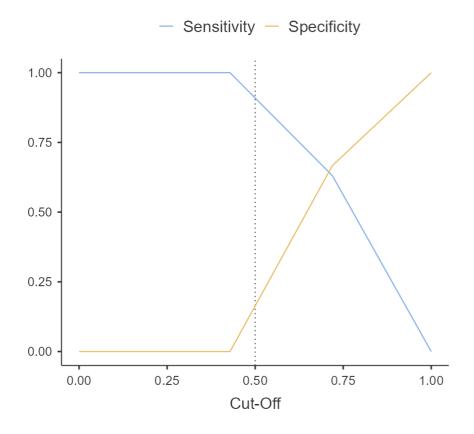
Collinearity Statistics

| | VIF | Tolerance |
|--------------|------|-----------|
| Intervention | 1.00 | 1.00 |

[3]

Prediction

Cut-Off Plot

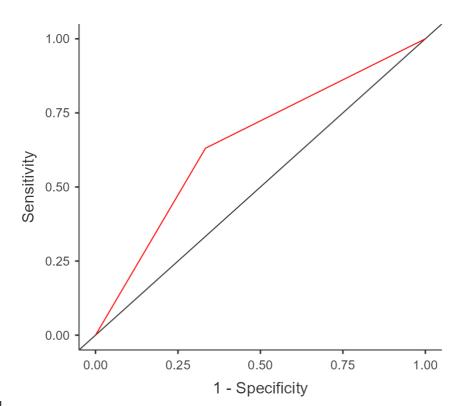


Predictive Measures

| Accuracy | Specificity | Sensitivity | AUC | |
|----------|-------------|-------------|-------|--|
| 0.646 | 0.667 | 0.631 | 0.649 | |

Note. The cut-off value is set to 0.5

ROC Curve



Omnibus Likelihood Ratio Tests

| Predictor | χ² | df | р |
|--------------|---------|----|-------|
| Intervention | 9.31701 | 1 | 0.002 |
| Duration | 0.00198 | 1 | 0.964 |

[3]

Model Coefficients - Cured

| | | 95% Confidence Interval | | _ | | | | 95% Confidence Interval | |
|--------------------------------|----------|----------------------------|-------|-------|---------|-------|---------------|----------------------------|-------|
| Predictor | Estimate | Lower | Upper | SE | Z | р | Odds ratio | Lower | Upper |
| Intercept Intervention: | -0.23466 | -2.627 | 2.158 | 1.221 | -0.1923 | 0.848 | 0.791 | 0.0723 | 8.65 |
| Intervention – No Treatment | 1.23353 | 0.421 | 2.046 | 0.415 | 2.9755 | 0.003 | 3.433 | 1.5235 | 7.74 |
| Duration | -0.00784 | -0.353 | 0.337 | 0.176 | -0.0445 | 0.964 | 0.992 | 0.7028 | 1.40 |

Note. Estimates represent the log odds of "Cured = Cured" vs. "Cured = Not Cured"

Assumption Checks

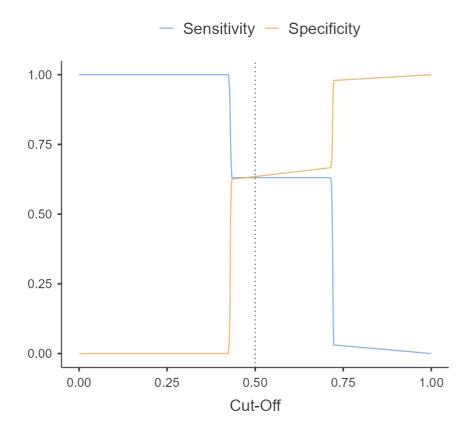
Collinearity Statistics

| | VIF | Tolerance |
|--------------|------|-----------|
| Intervention | 1.08 | 0.930 |
| Duration | 1.08 | 0.930 |

[3]

Prediction

Cut-Off Plot

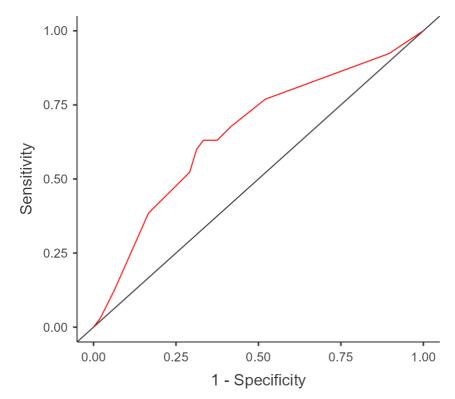


Predictive Measures

| Accuracy | Specificity | Sensitivity | AUC | |
|----------|-------------|-------------|-------|--|
| 0.646 | 0.667 | 0.631 | 0.658 | |

Note. The cut-off value is set to 0.5

ROC Curve



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] Fox, J., & Weisberg, S. (2020). *car: Companion to Applied Regression*. [R package]. Retrieved from https://cran.r-project.org/package=car.
- [4] Sing, T., Sander, O., Beerenwinkel, N., & Lengauer, T. (2015). *ROCR: Visualizing the Performance of Scoring Classifiers*. [R package]. Retrieved from https://cran.r-project.org/package=ROCR.