Examples of Results in the Text

In simple examples, statistical information is incorporated into the text. Alternatively, the various elements of the analyses could be presented in a table or figure associated with the text.

Frequencies

Though often not reported, simple summary statistics – like the median and quartiles – provide the reader with basic frequency information about the variable under investigation. Both of the following versions present the required information, though the second focuses more on the interpretation of the statistic.

> For the eight participants, Outcome scores of 2.25, 4.00, and 5.50 represented the 25th, 50th, and 75th percentiles, respectively.
>
> The participants (*N* = 8) had a low *Mdn* Outcome score of 4.00 (*IQR* = 2.25 – 5.50).

Descriptives

The purpose of the descriptive statistics is to provide the reader with an idea about the basic elements of the group(s) being studied. Note that this also forms the basis of the in-text presentation of descriptive statistics for other inferential analyses. Both of the following versions present the required information, though the second focuses more on the interpretation of the statistic.

> The eight participants had a mean Outcome of 4.00 (*SD* = 3.12).
>
> The participants (*N* = 8) had a low mean Outcome score (*M* = 4.00, *SD* = 3.12).

Correlations

Correlations provide a measure of statistical relationship between two variables. Note that correlations can also have inferential information associated with them (and that this information should be summarized if it is available and of interest like in the second example below).

> For the participants (*N* = 4), the scores on Outcome 1 (*M* = 2.00, *SD* = 2.45) and Outcome 2 (*M* = 6.00, *SD* = 2.45) were moderately correlated, *r*(2) = .50.
>
> For the participants (*N* = 4), the scores on Outcome 1 (*M* = 2.00, *SD* = 2.45) and Outcome 2 (*M* = 6.00, *SD* = 2.45) were moderately but not statistically significantly correlated, *r*(2) = .50, 95% CI [-0.89, 0.99], *p* = .500.

Regression

Regression models and coefficients provide a measure of statistical relationship between two variables. Note that regression models and coefficients can also have inferential information associated with them (and that this information should be summarized if it is available and of interest like in the second example below).

For the participants ($N = 4$), the scores on Outcome 1 ($M = 2.00$, $SD = 2.45$) moderately predicted Outcome 2 ($M = 6.00$, $SD = 2.45$), $\beta = .50$, $R^2 = .25$.

For the participants ($N = 4$), the scores on Outcome 1 ($M = 2.00$, $SD = 2.45$) did not significantly predict Outcome 2 ($M = 6.00$, $SD = 2.45$), $\beta = .50$, $t = 0.82$, $p = .500$.

Confidence Intervals (of the Mean)

Confidence intervals provide a range estimate for a population value (e.g., the mean). Note that the width of the interval can be altered to reflect the level of confidence in the estimate. Both of the following versions present the required information, though the second focuses more on the interpretation of the statistic.

The eight participants had a mean Outcome score of 4.00 ($SD = 3.12$), 95% CI [1.39, 6.61].

The participants ($N = 8$) scored low on the Outcome ($M = 4.00$, $SD = 3.12$), 95% CI [1.39, 6.61].

One Sample t Test

For this analysis, a sample mean has been compared to a user-specified test value (or a population mean). Thus, the summary and the inferential statistics focus on that difference. The first example focuses on statistical significance testing, whereas the second version includes and emphasizes interpretation of the confidence interval and effect size.

A one sample *t* test showed that the difference in Outcome scores between the current sample ($N = 8$, $M = 4.00$, $SD = 3.12$) and the hypothesized value (7.00) was statistically significant, $t(7) = -2.72$, $p = .030$.

Analyses revealed that the current sample ($N = 8$, $M = 4.00$, $SD = 3.12$) had dramatically higher Outcome scores than the hypothesized value (7.00), 95% CI [-5.61, -.39], $d = -0.96$, $t(7) = -2.72$, $p = .030$.

Paired Samples t Test

For this analysis, the differences between two measurements on one set of people are being compared. Thus, the summary and the inferential statistics focus on that difference. The first example focuses on statistical significance testing, whereas the second version includes and emphasizes interpretation of the confidence interval and effect size.

A paired samples *t* test showed that the difference in Outcome scores ($N = 4$) between the first time point ($M = 2.00$, $SD = 2.45$) and second time point ($M = 6.00$, $SD = 2.45$) was statistically significant, $t(3) = -3.27$, $p = .047$.

Analyses revealed that Outcome scores ($N = 4$) increased dramatically from the first time point ($M = 2.00$, $SD = 2.45$) to the second time point ($M = 6.00$, $SD = 2.45$), 95% CI [-7.90, -0.10], $d = -1.63$, $t(3) = -3.27$, $p = .047$.

Independent Samples t Test

For this analysis, the emphasis is on comparing the means from two groups. Here again the summary and the inferential statistics focus on the difference. The first example focuses on statistical significance testing, whereas the second version includes and emphasizes interpretation of the confidence interval and effect size.

> An independent samples *t* test showed that the difference in Outcome scores between the first group (n = 4, M = 4.00, SD = 2.45) and the second group (n = 3, M = 6.00, SD = 2.45) was not statistically significant, $t(6) = -2.31$, $p = .060$.

> Analyses revealed potentially large, yet inconclusive, differences in Outcome scores between the first group (n = 4, M = 4.00, SD = 2.45) and the second group (n = 3, M = 6.00, SD = 2.45), 95% CI [-8.24, 0.24], $d = -1.63$, $t(6) = -2.31$, $p = .060$.

One Way ANOVA

The ANOVA provides an omnibus test of the differences across multiple groups. Because the ANOVA tests the overall differences among the groups, the text discusses the differences in general. The first example focuses on statistical significance testing, whereas the second version includes and emphasizes interpretation of the effect size.

> A one way ANOVA showed that the differences in Outcome scores between the first group (n = 3, M = 2.00, SD = 2.45), the second group (n = 3, M = 6.00, SD = 2.45), and the third group (n = 3, M = 7.00, SD = 2.45) were statistically significant, $F(2,9) = 4.67$, $p = .041$.

> Analyses revealed large overall differences in Outcome scores between the first group (n = 3, M = 2.00, SD = 2.45), the second group (n = 3, M = 7.00, SD = 2.45), and the third group (n = 3, M = 7.00, SD = 2.45), $\eta^2 = .51$, $F(2,9) = 4.67$, $p = .041$.

Post Hoc Comparisons

Post hoc comparisons build on the ANOVA results and provide a more focused comparison among the groups and usually follows a presentation of the ANOVA (which already includes the descriptive information). The first example focuses on statistical significance testing, whereas the second version includes and emphasizes interpretation of the confidence intervals (and can be presented on its own).

> Tukey’s HSD tests showed that the first group scored statistically significantly different than the third group, $t(9) = -2.89$, p = 043. However, the other comparisons were not statistically significant ($ps > .05$).

> A series of Tukey's HSD comparisons revealed that the first group (n = 3, M = 2.00, SD = 2.45) scored substantially lower Outcome scores than the third group (n = 3, M = 7.00, SD = 2.45), 95% CI [-9.84, -.16], $t(9) = -2.89$, p = 043. However, the other comparisons revealed effectively little to no difference between the other groups ($ps > .05$).

Repeated Measures ANOVA

The RMD ANOVA tests for overall differences across the repeated measures. As such, its summary parallels that of the One Way ANOVA. The first example focuses on statistical significance testing, whereas the second version includes and emphasizes interpretation of the effect size.

> A repeated measures ANOVA showed that the difference in Outcome scores (N = 4) between the first time point (M = 2.00, SD = 2.45) and second time point (M = 6.00, SD = 2.45) was statistically significant, F(1,3) = 10.67, p = .047.

> Analyses revealed a substantial increase in Outcome scores (N = 4) from the first time point (M = 2.00, SD = 2.45) to the second time point (M = 6.00, SD = 2.45), partial η^2 = .78, F(1,3) = 10.67, p = .047.

Factorial ANOVA

The Factorial ANOVA provides statistics for the main effects and interactions in a factorial design. Each effect would be summarized in a style analogous to a One Way ANOVA. The first example focuses on statistical significance testing, whereas the second version includes and emphasizes interpretation of the effect size.

> A 2 (Factor A) x 2 (Factor B) ANOVA was conducted on the Outcome scores. Neither Factor A, F(1,12) = 0.67, p = .430, nor Factor B, F(1,12) = 2.67, p = .128, had a statistically significant impact on the Outcome. However, the interaction was statistically significant, F(1,12) = 6.00, p = .031.

> Analyses revealed that neither Factor A, partial η^2 = .05, F(1,12) = 0.67, p = .430, nor Factor B, partial η^2 = .18, F(1,12) = 2.67, p = .128, had an appreciable impact on the Outcome. However, the interaction had a large impact on the Outcome, partial η^2 = .33, F(1,12) = 6.00, p = .031.