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| Statistics | | |
|  | Univariate/Summary | Bivariate |
| Without  Plot | summary(df) # no sd  summary(df$var)  data %>%  select(var1, var2, var3) %>%  summary()  Hmisc::describe() # generally hard to read; BUT gives frequencies/proportions for categorical variables.  psych::describe() # doesn’t work for categorical, though identifies them with \*s  psych::describeBy() # pretty good for summary stats by group categories  **Base R**  ***for continuous***  mean(df$var, na.rm = TRUE)  median()  sd()  var()  min()  max()  range()  iqr()  quantile()  ***for categorical***  object <- table(df$catvar)  object # frequencies  prop.table(object) # proportions | **Continuous & Continuous – Correlation**  statsExpressions::corr\_test(df, x, y, type = “parametric)  psych::corr.test(df$var1, df$var2)  cor(df$var1, df$var2, use = “complete.obs”) # just the coefficient  cor.test(df$var1, df$var2, use = “complete.obs”) # coefficient plus p-value  df %>%  select(var1, var2, var3) %>%  sjPlot::tab\_corr(na.deletion = “listwise”,  corr.method = “pearson”,  title = “Title of table”,  var.labels = c(“var1 label”, “var2 label”, “var3 label”,  show.p = TRUE, digits = 2, triangle = “lower”,  file = “nameofmatrix.htm”) # htm table will be located in files  **Dichotomous & Continuous – t-test/compare means**  t.test(contvar ~ divar, data = df) #nice  **Polychotomous & Continuous – ANOVA/compare means**  object <- aov(contvar ~ groupvar, data = df)  summary(object) #unfortunately no means reported  ***To get means – at least 2 options***  psych::describeBy(df$contvar, df$groupvar)  df %>%  dplyr::group\_by(groupvar) %>%  dplyr::summarize(mean mean(pfairpoor, na.rm = TRUE)  **Categorical & Categorical** – **Chi-squared test of independence/contingency table**  chisq.test(df$cat1, df$cat2)  sjPlot::tab\_xtab(var.row = df$catvar1, var.col = df$catvar2,  title = “Title of contingency table”, show.row.prc = TRUE) # creates formatted contingency table with chi-sq, and Cramer’s V |
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| With Plot | **Continuous Variable**  [gghistostats](https://indrajeetpatil.github.io/ggstatsplot/articles/web_only/gghistostats.html)(df, var)  [grouped\_gghistostats](https://indrajeetpatil.github.io/ggstatsplot/reference/grouped_gghistostats.html)(df, x = var1,  grouping.var = groupvar)  **Categorical Variable** | **Correlation/ScatterPlot**  [ggscatterstats](https://indrajeetpatil.github.io/ggstatsplot/articles/web_only/ggscatterstats.html)(df, x = xvar, y = yvar)  df %>%  select(var1, var2, var3) %>%  [sjPlot::sjp.corr](https://cran.r-project.org/web/packages/sjPlot/sjPlot.pdf)(corr.method = “pearson”, title = “title”, na.deletion = c(“listwise”)  **Comparison of Means (t-test/ANOVA)**  [ggbetweenstats](https://indrajeetpatil.github.io/ggstatsplot/articles/web_only/ggbetweenstats.html)(df, x = groupvar, y = contvar)  **Chi-squared Test (contingency table and stats)**  sjPlot::tab\_xtab(var.row = df$rowvar,  var.col = df$colvar,  title = “Table title”,  show.row.prc = TRUE)  sjPlot::plot\_xtab(var.row = df$rowvar,  var.col = df$colvar,  margin = “row”,  bar.pos = “stack”,  coord\_flip = TRUE |