Given Research Question

Search Literature and other Sources

Results

Simulation

```
n_nr_sim_obs <- 30
X_sim <- rnorm(n_nr_sim_obs,
               mean = mean(df_bw_bc$Breast.Circumference),
               sd = sd(df_bw_bc$Breast.Circumference))
Y_sim <- b_0 + b_1 * X_sim + rnorm(n_nr_sim_obs, mean = 0, sd = sd_e)
```

Analyse Simulated Data

Compare Results to Input

```
Call:
lm(formula = Body.Weight ~ Breast.Circumference, data = df_bw_bc)

Residuals:
    Min      1Q   Median      3Q     Max
-17.3941  -6.5525  -0.0673   9.3707  13.2594

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)          -1065.115    255.483  -4.169 0.003126 **
Breast.Circumference     8.673      1.420   6.108 0.000287 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 11.08 on 8 degrees of freedom
Multiple R-squared:  0.8234,    Adjusted R-squared:  0.8014
F-statistic: 37.31 on 1 and 8 DF,  p-value: 0.000287
```