Text from Bliese - Multilevel modeling in R

2.6.3 Generic functions for extracting model information

The object created by lm() is a fitted model object; technically a list of results of class "lm".

Information about the fitted model can then be displayed, extracted, plotted and so on by using generic functions that orient themselves to objects of class "lm". These include:

add1 coef effects kappa predict residuals
alias deviance family labels print step
anova drop1 formula plot proj summary

A brief description of the most commonly used ones is given below.

coefficients(object)
Extract the regression coefficients.
Short form: coef(object).

plot(object)
Produce four plots, showing residuals, fitted values and some diagnostics.

predict(object, newdata=data.frame)
The dataframe supplied must have variables specified with the same labels as the original. The value is a vector or matrix of predicted values corresponding to the determining variable values in data.frame.

print(object)
Print a concise version of the object. Most often used implicitly.

residuals(object)
Extract the (matrix of) residuals, weighted as appropriate.
Short form: resid(object).

summary(object)
Print a comprehensive summary of the results of the regression analysis. The summary function is widely used to extract more information from objects whether the objects are dataframes or products of statistical functions.