MES: Quantitative & Qualitative Methods

Week 3, Tuesday Assignment

Due: Monday, April 25, 9pm to: Moodle

**Your R assignment for this week (Due NEXT MONDAY, April 25, 9PM), to the moodle, as a .doc or .docx file:**  complete this assignment with your partner, and hand in one document. This assignment is taken from Dalgaard, Ch. 5. We strongly suggest that you re-read the obviously relevant parts of Dalgaard **as you do this assignment**.

1. run the one sample t-tests (using t.test and wilcox.test) on the daily.intake data, to determine if the energy intake of obese women differs from the mean energy intake of all women. The mean against which you are expected to test the daily.intake data is given in Dalgaard as a mean: p. 97, middle of the page:

You might wish to investigate whether the women’s energy intake deviates systematically from a recommended value of 7725 kJ.

Write a short (about 1 paragraph) analysis of the results. If you were unable to complete the Wilcoxon t-test, say why and how you might fix this. If you were able to complete the test, say how you did this and your analysis should contrast the results you get from running both tests.

1. run one two sample t-test to compare energy expenditures between lean and obese women. to do this, remember that you will need to load the ISwR package/library (Packages->loadPackage ) and attach the relevant dataset, i.e., attach(energy). As above, write a short (about 1 paragraph) analysis of the results. Your analysis should contrast the results you get from running each of the tests. you can choose among the functions: t.test(expend~stature), var.test(), Wilcox.test. say why you chose which test, when you write up your results and interpretation.
2. run a paired t test on two measurements on the same experimental unit.

This problem was taken nearly verbatim from Section 5.6 of Dalgaard. By the “same experimental unit, he wants you to use “daily.intake” – the same data used in problem 1. To understand this, you probably would have had to read (and remember!) chapters 1 and 5 more carefully than beginning R students should be expected to! Sorry!

to be absolutely clear (I hope), you will need to use the following commands:

* attach(intake)
* intake

pre post

1 5260 3910

2 5470 4220

…

11 8770 7335

use pre- and post0menstrual energy intake in a group of women. these data are available in intake. you will use t.test(…, paired=T) or the Wilcoxon paired t-test. in your results and interpretation writeup, say why you chose which t-test to do this analysis.