



Cornell University  
**Office of Statistical Consulting**  
Colleges of Human Ecology and Agriculture and Life Sciences  
Division of Nutritional Sciences

## Stat Happenings #3: Statistics News You Can Use From the Office of Statistical Consulting Spring 2004

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### 1. Basic statistical knowledge and skills needed for a quantitative research project

When involved in research, students learn how to apply knowledge acquired in a statistics class to real data. Indeed, besides basic statistical knowledge, a researcher also needs the skills to put this information into practice. Students and researchers who have acquired the basic knowledge and skills will be able to converse efficiently with a statistical consultant and can then get further help by setting up individual consulting appointments

(<http://www.human.cornell.edu/admin/statcons/>).

Following is a list of statistical topics that students and researchers should understand and be able to put into practice before starting to work with quantitative data.

#### **\*\*Organizing data**

- Knowing what variables and observations are.
- Coding data (including missing data).
- Entering data into a spreadsheet.

#### **\*\*Verifying, cleaning, transforming and recoding data using statistical software.**

#### **\*\*Describing one variable at a time**

- Continuous variables: means, standard deviations, histograms, box plots.
- Categorical variables: frequencies, bar charts.

#### **\*\*Looking at two variables together**

- Two categorical variables: cross-tabulations, bar charts.
- Two continuous variables: correlations, simple linear regression, scatter plots.
- One continuous and one categorical variable: comparison of means, group box plots or bar charts.

#### **\*\*Simple hypothesis testing**

- One sample t-test, independent sample t-test, paired t-test, one-way and two-way ANOVA.
- Chi-square test of independence.
- Testing of parameters in simple regression.

### 2. Basic Data Analysis Workshop

Researchers and students who need to acquire the basic statistical knowledge and skills to analyze quantitative data can benefit greatly from attending a Basic Data Analysis workshop,

which we will be offering twice this semester. We especially recommend this workshop for undergraduates working on honors theses for which they need to perform data analysis. The Basic Data Analysis workshop is in two parts and will be offered in the Stone Computer Room in Mann library on Monday, February 23 **and** Wednesday, February 25 from 10:00am - noon, and also on Tuesday, March 16 **and** Thursday, March 18 from 1:00pm-3:00pm. Since enrollment is limited, registration is required. Please sign up at the following website: <http://www.mannlib.cornell.edu/reference/instruction/workshops.html#Data> .

### **3. CISER's services this semester**

a. CISER (Cornell Institute for Social and Economic Research) is offering a new on-campus consulting service to help you with data access, data manipulation, program logic, program syntax and de-bugging, as well as database conversions, and file transfers across computing platforms. Faculty, staff, and graduate students who would like to consult with one of their helpdesk consultants may now go to the circulation desk at Mann Library anytime between 10-12 and 2-4 Monday-Friday and check out a key for Room 273. That room is set up with a video camera and ViaVideo software that makes it possible for you to see and talk with a consultant, as well as share applications such as Terminal Services, SAS, SPSS, Stata, and Matlab. Instructions for using this service are posted at <http://www.ciser.cornell.edu/computing/NewConsult.shtml>, and are also available in hardcopy in Room 273 at Mann.

b. CISER is offering computing workshops on SAS, Matlab, SPSS, and Stata. Details and registration information are available at <http://www.ciser.cornell.edu/ASPs/Workshops.asp>.

### **4. Fix for SAS 8.2 Online Help and Web Services available**

It has come to our attention that the SAS 8.2 online help options and web services are not working. This can be fixed by visiting <http://ftp.sas.com/techsup/download/hotfix/hotfix.html> and installing the BASE SAS Hot Fix Bundle **82BX07**. The hot fix package download is a self-extracting executable named 82bx07wn.exe. Launching the executable will initiate the installation wizard, which will guide you through the set-up process. All current SAS sessions must be terminated before applying this fix.

If you encounter any other SAS software problems, from any version, there are additional fixes available at the same website that might address your problems.

### **5. Cecilia Grace-Martin**

We are pleased and excited to announce that Karen Grace-Martin, one of our consultants, gave birth to a girl, Cecilia, on January 17, 2004. Both mom and baby are doing well. We wish Karen and husband Michael the best of luck with the new addition to their family. Karen will be back in her office in mid-April.

(This newsletter was distributed to faculty and graduate students in the Division of Nutritional Sciences and the College of Human Ecology, and faculty in the College of Agriculture and Life Sciences, by the Office of Statistical Consulting. Please forward it to any interested colleagues and research staff. Anyone not receiving this newsletter who would like to be added to the mailing list for future newsletters should contact [statcons@cornell.edu](mailto:statcons@cornell.edu). Information about the Office of Statistical Consulting can be obtained at World Wide Web address <http://www.human.cornell.edu/admin/statcons/>.)