

Statistical Consulting Center Annual Report 2004–2005

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1 Overview

The Statistical Consulting Center at Florida State University is a research assistance facility for the students, faculty and staff at FSU. Occasionally, clients from outside of FSU call and are given, a one-time, one-hour appointment. The Statistical Consulting Center is a free service for members of the FSU community. Services included but are not limited to:

- Translating hypotheses into statistical terms
- Designing sampling procedures
- Choosing appropriate statistical methods
- Interpreting computer output
- Phrasing statistical results
- Referrals to other statistical help
- The Statistical Consulting Center generally does not perform actual analysis.

Appointments for the 2004–2005 academic year were typically scheduled on Tuesdays and Thursday. Alternative arrangements were made for any clients that were unavailable during the scheduled hours. During the Spring 2004–2005 academic year everyone who requested assistance was seen by the Statistical Consulting Center within one week of his or her initial call for assistance.

2 Summary of Business Activities

The Statistical Consulting Center was managed by Robert Fowler during the 2004–2005 academic year. The consulting center worked with 127 clients during that period. The majority of the clients were graduate students. Fourteen faculty members were assisted with work related to grant funded research or publishing in academic journals. Additionally, eight groups were seen from outside the FSU community.

The clients from the 2004-2005 academic year came from across the University. The departments and schools represented include:

- Nursing
- Financial Mathematics
- Physical Education
- Psychology
- Biology
- Physics
- Metrology
- Oceanography
- Business
- Sports Management and Recreation Management
- Education
- Computer Science
- Engineering

Generally each client was seen twice. Many of the questions involved designing and understanding appropriate sampling designs and analysis methods. These issues included propagation of errors, reliability, validity, sample size, and power. More than half the clients had data and need assistance in either choosing the appropriate methods or interpreting results. There were many questions about the operation of SPSS, and some other software packages. For highly specific questions with software that was unfamiliar

to the Statistical Consulting Center, several clients were referred to Betty Brown, the computational applications specialist at ACNS.

Clients of the Statistical Consulting Center have a large variety of statistical backgrounds. Some clients were unfamiliar with the basic terminology and concepts of statistics. Other clients, who had a substantial understanding of statistical concepts and techniques, requested assistance on topics that required a moderate level of research in order to assist them.

3 Typical Cases

The cases during the 2004–2005 academic year varied from highly technical specific questions to clients requiring guidance through an entire research project. The typical case involved two or three appointments for a combined meeting time of between two to three hours. Typically, the first meeting was used to design or confirm the appropriateness of the client’s study or experimental design. The following meetings were used to explore unexpected issues and interpret results from the data analysis.

An example of the typical case is that of a recent Ph.D. graduate from the School of Nursing. Her work involved investigating various aspects of emotional and physical stress experienced by emergency room nurses. She met with the consulting center five times over the course of the year. The first two meetings were used to revise her survey instrument and decide on appropriate methods for analyzing the anticipated data. The third meeting was spent discussing how to input her data and how to handle various missing data problems. Her final two meetings were spent interpreting the data analysis output from SPSS. When we concluded our meetings she was comfortable that she could correctly explain the results of her analysis.

4 Reflections

Working in the Statistical Consulting Center has been an exciting experience. The clients bring real problems without the niceties of textbook problems. Every client has taught me something new, usually about a field of study I barely new knew existed before the meeting. I would like to thank the faculty and staff of the Department of Statistics for all their support.