

STATISTICA improves evaluation and accuracy of excessive data research

KEY POINTS

Business

Medical pre- and post-graduate studies

Overview

- Charles University in Prague and Motol University Hospital jointly run the second faculty's nursing department
- Bachelor's program qualifies graduates for health care nursing careers according to EU standards
- Provides lifelong tutoring and other continuing education events

Challenges

Excessive volume of specialized questionnaire survey data exceeded the analytical capabilities of other tools.

StatSoft Solution

- *STATISTICA Advanced*
- Reporting Tables

Results

- Compared to other tools, *STATISTICA* saves time, eliminates errors, and provides more specific and accurate results RE: questionnaire survey analyses
- Complete integration with MS Office
- Department of Nursing well pleased with StatSoft's customized vocational training and educational seminars

"Collaboration with StatSoft has always been and still is on a professional level and has completely fulfilled and sometimes even exceeded our expectations."

— Daniel Jirkovský, Ph.D., MBA
*Head of the Department of Nursing,
Second Faculty of Medicine*

BACKGROUND

The Department of Nursing is a joint program of the Second Faculty of Medicine, Charles University in Prague and Motol University Hospital. The department teaches within General Medicine and Nursing programs, focusing on nursing, psychological, and pedagogical disciplines for prospective physicians and general nurses. Department staff is also involved in lifelong learning activities, including post-graduate training of non-physician medical staff, especially in the implementation of specialized training, qualification, and certified courses accredited by the Czech Republic's Ministry of Health.

MISSION

The Department of Nursing seeks to use data analysis in such a way that would help adjust the nursing department's didactic aims, methods, and tools, with the goal of developing more efficient and individually designed mentoring and educational events.

CHALLENGE

The Department of Nursing receives large amounts of data from specialized, long-term studies and student research papers. Questionnaire surveys within the bachelor's programs are evaluated by the department using *STATISTICA* software, as is data from a number of other projects. The department has generally outsourced data processing for larger research projects, mainly to achieve a successful balance of professional quality and time savings. Therefore, the department turned to StatSoft CR s.r.o. to process outputs from questionnaire surveys, which are focused on mentoring in clinical practice and evaluation of mentor activities.

The Department of Nursing required a complete evaluation of the data and a final report with annotated conclusions of analysis. The Second Faculty of Medicine has owned *STATISTICA* software for several years, and co-operation with StatSoft has always been flawless and friendly. As a result, when the nursing department's need to evaluate extensive questionnaire surveys arose, the choice of analytics software supplier was clear.

A specific objective was to evaluate data on the mentoring of clinical nursing practice, including the evaluation of mentors' activity. Also evaluated were the data indicators regarding effectiveness of qualification and post-qualification training of physicians and non-physician medical staff at Motol University Hospital. The results of data analysis on the mentoring of clinical nursing practice, including evaluation of mentors, will be used as a basis for designing a new training program. This program will be part of a certified course to be accredited in 2015.

"The aim of our investigation was to get a sufficient amount of valid data for designing a training program which will be aimed at specific groups of

STATISTICA Case Study: Department of Nursing, Second Faculty of Medicine at Charles University in Prague and Motol University Hospital

trainees. We would like to adjust our didactic aims, methods, and tools to our target group(s) of trainees based on the analysis of the acquired data," says Daniel Jirkovský, Ph.D., MBA, Head of the Department of Nursing of Second Faculty of Medicine, Charles University and Motol University Hospital, and Head of Department of Independent Education at Motol University Hospital. "Our efforts should result in more efficient and individually designed educational events, which are expected to ensure greater portability of new knowledge and skills into practice of our trainees."

HOW STATISTICA HELPED

Dr. Jirkovský further notes that, "Fast, reliable, and professional processing of our results has been our priority. We have also appreciated the clear graphical representation, accurate scaling, and especially the complete integration of the output with MS Office, which is supported by a new version of *STATISTICA*. It is now very easy to work directly with a *.xls table or insert our outputs automatically into MS Word."



Photo from Department of Nursing "Presentation" page
<http://www.lf2.cuni.cz/info2lf/ustavy/uo/eng/>

StatSoft also contracted to organize educational seminars in biostatistics for employees, where physicians and other specialists from different disciplines were trained. The aim was to provide an introduction into statistical inference and to support research work of individual departments.

RESULTS

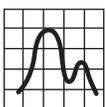
Current collaboration with StatSoft includes:

1) **The actual analytical work:** *STATISTICA* is currently employed by professionals and students of the Department of Nursing to evaluate smaller research projects within some seminar projects and within the majority of bachelor's theses. Dr. Jirkovský comments on this: "*STATISTICA* allows us to analyze data from questionnaire surveys and to generalize their results reliably. Working with this program makes things much easier for us. It saves time, eliminates errors, and, most importantly, provides more specific and accurate results. One of the main aims of education is to teach students how to evaluate data critically and think about analytical outputs."

2) **Consultation and services:** This refers to evaluation of extensive research as well as to custom-tailored, multi-day, vocational training for selected employees. "We were fully satisfied with the organization and content of the course. We also greatly appreciated a bonus in the form of consultation and revision of previous analytical procedures. We are using textbooks from the course all the time, referring to them in our practice or during teaching. The same applies to practical guidance and specialized articles from www.statsoft.cz," says Dr. Jirkovský.

Dr. Jirkovský also comments on additional technical and analytical support: "My colleagues and I all highly appreciate the personal, forgiving, and incredibly patient attitude shown by the professionals from StatSoft. Therefore, we plan to keep using their services for major surveys and statistical projects."

"We consider these customers to be our friends," adds Ing. Miloš Uldrich, consultant at StatSoft CR s.r.o. "Our work for the Department of Nursing, Second Faculty of Medicine, Charles University and Motol University Hospital means a great deal to us."



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