



## Statistical Literacy Serves Police Officers in Many Ways

*Written by Irina Soderstrom, Ph.D.*

I am often asked by my students why they have to take the course entitled Applied Criminal Justice Analysis, which is a statistics course that I have taught at EKU for the past 16 years. I usually provide general explanations, such as how we are all consumers of research and it is necessary to be statistically literate to understand the results of research studies in our field. Additionally, we often are producers of research in our jobs, particularly the administrative jobs that our higher education qualifies us to perform. These administrative jobs often require basic statistical skills to plan uses of resources or to generate job performance reports. Lastly, I inform my students that having statistical skills makes them much more job marketable and promotable.

My thoughts regarding this last point always center on one my former students, an Alumnus of our Criminal Justice Master's program, Assistant Chief Robert Stack. Assistant Chief Stack spoke with me recently and told me many examples of how statistical skills made it possible for him to climb the ranks of the Lexington, Kentucky Police Department. I have had occasion to speak to Assistant Chief Stack periodically over the past decade or so. Each time we communicate he has reached a higher rung on the Department's ladder. Knowing that he is a very busy person, I was delighted that he was willing to enthusiastically share his thoughts about the need for statistical literacy among police officers.

With respect to the general role that statistical and methodological skills have played in his policing career, Assistant Chief Stack stated, "As a law enforcement executive, I utilize the information I learned in graduate level statistics and research methodology on a continuing basis. As the prior commander of the Lexington (KY) Division of Police, Planning and Analysis Unit, I was often involved in research projects with EKU faculty and students that required knowledge of research methods and statistics. Most large law enforcement agencies have similar units that generate statistics, conduct research and collaborate with universities on projects. Furthermore, statistics are often required to be in compliance with federal grants in order to demonstrate whether programs or enforcement initiatives funded by a grant were effective. When faculty or students rely on this agency's data for research, I draw upon my statistics education to review the research results and develop recommendations for how those results should be acted upon."

Assistant Chief Stack then went on to give a specific example of how statistical literacy played an important role in his agency stating, “Many issues confronting law enforcement in recent years, such as driving while black and disproportionate minority confinement require law enforcement agencies to conduct internal analyses of data in order for an agency to determine if the issues are evident within their agency. In the late 1990’s, research of a similar topic was conducted by a media outlet and the methodology was flawed because neither random sampling of the data nor use of all available data was used. A regional university’s statistics program (not ECU) examined a summary of the results and declared that they were statistically significant. Without knowledge of accepted methods of statistical analysis, I could not have confronted the university with the errors in the research. Ultimately, the university admitted its error and learned a valuable lesson about getting drawn into a media debate without sound scientific facts.”

Lastly, Assistant Chief Stack provided a list of several more ways that statistical skills are employed in police departments, stating “The Lexington Division of Police, like all agencies internationally accredited through the Commission on Accreditation for Law Enforcement Agencies, Inc., (CALEA) is required to conduct annual statistical analyses of important topics such as use of force, vehicle pursuits, recruiting and hiring demographics, complaints as well as many others. These statistical reports include conclusions and recommendations designed to assist the agency’s CEO in deciding when to make changes to policy, training, and employee development. Personnel completing or reviewing these reports need knowledge of statistics in order to do their jobs effectively.”

Hopefully, this information that has been shared by a former ECU student who has used statistical and methodological skills to fulfill important roles in his agency, has demonstrated the importance of police studies students acquiring those same skills. Who knows? One day you might head the Planning and Analysis Unit for your police department. Or you might be promoted to the highest ranks of your agency, like Assistant Chief Robert Stack. So don’t complain about having to take an applied statistics course in your discipline. Such a course teaches you skills that are essential to the operation of your agency, and those skills may help you reach tremendous heights in your career.

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Dr. Irina R. Soderstrom is an associate professor in the Department of Criminal Justice. She received her B.A. in sociology/pre-law at the University of Illinois, Urbana-Champaign in 1987. She received her M.S. in administration of justice in 1990 and her Ph.D. in educational psychology/statistics and measurement in 1997 from Southern Illinois University at Carbondale.

Her primary teaching interests include statistics, research methods and research seminar courses at both the undergraduate and graduate levels. Her primary research focus is in program evaluation and she has conducted considerable evaluative research on parole programs, boot camps, correctional industries, teen courts and school safety.

<http://justicestudies.ecu.edu/people/soderstrom>