

Statistical Considerations for Readers and Authors of the Forensic Science Literature

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ABSTRACT: The use of numerical information and statistical methods is increasing sharply among forensic scientists publishing research and presenting analytical results for peer and judicial review. The importance of their work should not be obscured by the tendency for complex statistical analyses to confuse and mislead. Some considerations that would assist in our statistical communication include: sound statistical thinking, clear numerical notation, details of data collection, sample size, analytical details, inferential methods and assumptions, confidence intervals, linear regression assumptions, graphs, etc. Sound statistical thinking should guide the research and communication rather than technical details. The informed judgment of the researcher should be clear, apart from the statistical methodology. Better descriptive methods that emphasize the differences in data rather than complex inferential techniques may alone greatly improve our statistical communication. Since numerical information can easily confuse and mislead those unprepared, careful attention to a few basic principles should enhance the effectiveness of statistical communication in the forensic science literature.

KEY WORDS: Statistics, forensic science literature, numerical communication, statistical thinking
