Thongs, Flip-flops, and Unintended Pregnancy: The Seduction of P<0.05

Ruchi P. Moore, MD, Shelley L. Galvin, MA, Hytham M. Imseis, MD
Mountain Area Health Education Center, Department of Obstetrics and Gynecology Asheville, North Carolina

Objective: The objective of this project was to demonstrate the dangers of interpreting statistically significant findings from multiple analyses of databases (aka "data mining").

Study Design: A cross-sectional survey of personal preferences and obstetric outcomes was administered to consecutive patients presenting for routine obstetrical or postpartum care. Associations of preferences with primary outcomes including desire to be pregnant, route of delivery, and satisfaction with medical care were analyzed using Chi square, Spearman rho, and ANOVA, with $p < 0.05$ considered statistically significant.

Results: One hundred twenty-one women completed surveys for a response rate of 70%. We identified 26 significant associations from the 362 statistical analyses conducted; 18 were expected to be spurious based on $p < 0.05$. Unintended pregnancy was associated with preferences for scant clothing, brief communication, and sensual and poorly lit recreational activities.

Conclusions: Differentiating 8 meaningful relationships from the spurious findings revealed our biases and highlighted the true meaning of $p < 0.05$.

Key Words: Statistics, study design, data mining, resident education