

1145-VT-1440 **Myung Soon Song*** (song@kutztown.edu), 15200 Kutztown Rd, Kutztown, PA 19530. *A Numerical Likelihood-Based Approach to Synthesizing Correlation Matrices.*

Numerical approaches to developing accurate and efficient approximations to combined likelihoods of population correlation matrices in meta-analysis under normality assumptions for the data are studied. The likelihood is expressed as a multiple integral over the unit cube in $(p - 1)$ -dimensional space, where p is the row and column dimensionality of the correlation matrix. Three types of computation are proposed as ways to calculate the likelihood for any population correlation matrix P . As an application, an inference is explored concerning intercorrelations among cognitive anxiety, somatic anxiety, and self-confidence from Competitive State Anxiety Inventory (CSAI-2). Comparisons are made with conventional methods. (Received September 21, 2018)