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AVERAGING THE ASSESSMENTS OF MULTIPLE JUDGES: APPLICATIONS TO CLINICAL ASSESSMENT AND RESEARCH

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The reliability and validity of assessments of a judge-rated variable can be improved by using a composite judgment. A composite judgment—formed by taking the mean of the judgments of two or more individuals—has greater reliability and validity than a randomly selected single judge because averaging judgments reduces random error of measurement. This paper investigates the utility of a simple equation that predicts the expected validity coefficient for any given composite size.

Data from three clinical judgment studies are analyzed to show that, when the redundancy of judges is low, averaging their judgments can produce large increases in expected validity. Furthermore, the analyses confirm that the equation predicts extremely accurately (r = .999) the expected validity coefficient that any given composite size will yield.

Applications of the equation are illustrated. For example, the equation can help a clinician predict whether using two assessors in a given situation would be worth the extra cost. In planning a therapy outcome study, the equation helps predict whether a given level of statistical power would be attained more cost-effectively by using a composite judgment or by using a larger number of subjects.

ESTIMATING RELATIVE AND ABSOLUTE DEVELOPMENTAL CURVES USING THE KALMAN FILTER

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A topic of major interest in psychology and education is the development and implementation of reliable and valid procedures for estimating individual subjects' values on latent variables. When a longitudinal explanatory state-space model (as estimated, say, by means of the LISREL program) is available for the latent variables to be measured, the powerful Kalman filter can be used for that purpose. It is known to be optimal and usually leads to considerably improved latent value