Unsupported by statistical data. It might be added that other professions are in a position no stronger than that of occupational therapy, since medication is the only therapy in psychiatry that is unequivocally effective in a statistical sense.

Postuma identifies sensory integration as among the techniques or methods from which occupational therapists may choose. If occupational therapists are only users of techniques and methods, then they are technicians, not professionals. If, however, therapists become knowledgeable about how the human organism develops and functions, if they use knowledge from anthropology, developmental psychology, anatomy, and neurophysiology, as well as occupational therapy theory to illuminate and guide their treatment strategies, then they will truly be professionals.

REFERENCES

Lorna Jean King, OTR, FAOTA, Phoenix, Arizona

Interpreting Reliability Coefficients

The December 1982 AJOT article, "A Guide for Instrument Development and Validation," contains an incorrect statement regarding the interpretation of reliability coefficients. On page 796 the authors state: "Thus, if the observed reliability coefficient was .75, then .25 represents the degree of inconsistency in the measurement. The above coefficients would be interpreted as follows: 75 percent of the variance in the test was measuring the subject's actual ability, achievement, attitude, or personality, and 25 percent was due to chance or random error."

The square of the reliability coefficient, not the actual coefficient attained, is used to estimate variance. Therefore, the statement on interpreting the reliability coefficients should state "56 percent of the variance in the test was measuring the subject's actual ability, achievement, attitude, or personality, and 44 percent was due to chance or random error."

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Authors' Response

Dr. Pierson's suggested "correction" is erroneous. It confuses the interpretation of coefficients of alienation and determination (from regression analysis) with the interpretation of reliability estimates derived from the statistical definition of reliability. This error is commonly made by those who have not specifically studied measurement theory and instrument development.

Reliability, in classical test and measurement theory, is defined as the correlation between a test and its parallel form. Reliability coefficients (without squaring) estimate the proportion of total test variance that is accounted for by true score variance. This relationship is derived from a set of proofs contained in classical test theory.


Psychometrics and other statistical areas resemble one another, but each is based on its own mathematical assumptions, proofs, and definitions. Knowledge of statistics in one domain, such as descriptive and inferential statistical work, is no guarantee of expertise in another, such as psychometrics.

We recommend that prospective test developers in occupational therapy consult with qualified psychometricians. Ideally, consultants should meet the following criteria: 1. background of doctoral level coursework in test construction and measurement theory; 2. experience as a consultant on test development projects; and 3. publications related to test development. Consultation with an individual with this specific kind of