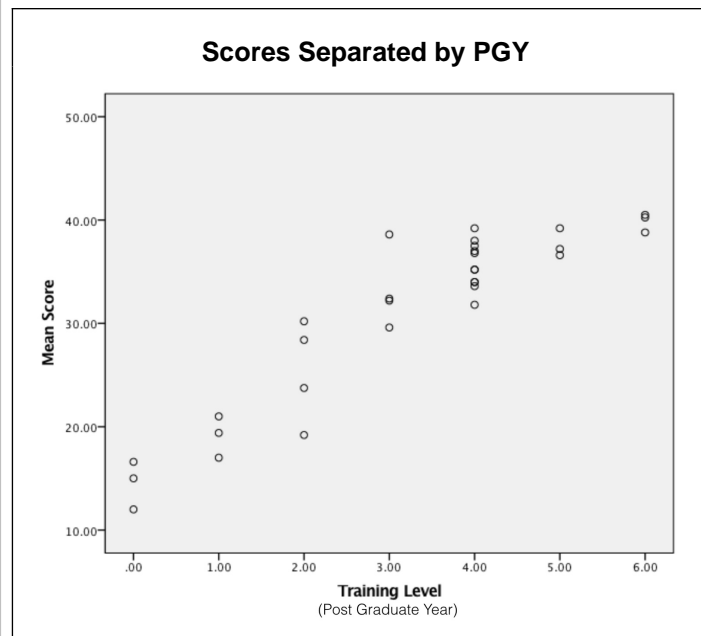
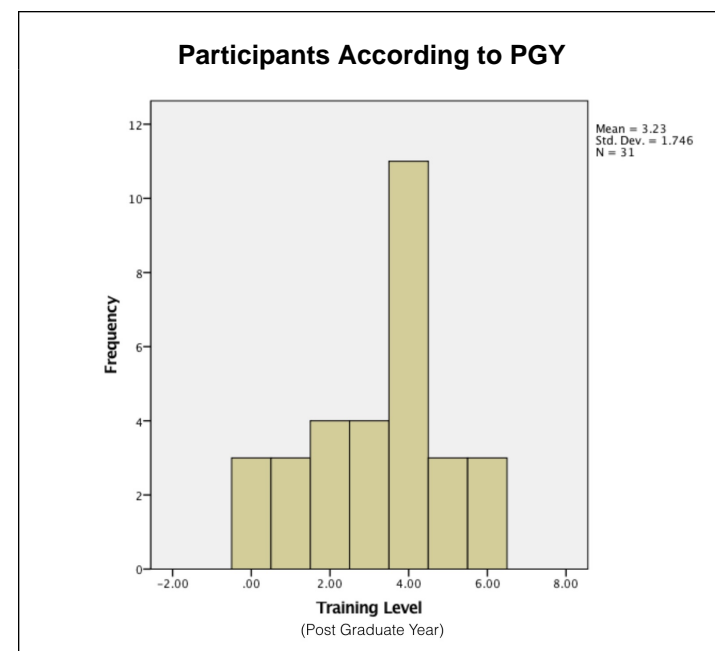


Learning Objectives

To determine the criterion validity and the internal consistency of the NOMAT scale.

Introduction

In order to train the largest number of students to the highest objective standard, the Congress of Neurological Surgeons (CNS) developed modules to simulate different procedures, along with scales to assess performance. The Northwestern Objective Microanastomosis Assessment Tool (NOMAT) is the scale that accompanies the CNS Microanastomosis module. The next step in validation of this scale is evaluating the criterion validity and the internal consistency of the NOMAT.



Methods

The Microanastomosis course was given during the 2015 annual CNS meeting. The module consisted of a written pretest, a didactic session, and a live demonstration of the microanastomosis technique. This was followed by a hands-on session. Each resident was situated with a microscope (OPMI pico Zeiss, Oberkochen, Germany), microsurgical tools, 10-0 Nylon suture, and a 1mm synthetic vessel (Biomet, Warsaw, IN). The residents were asked to cut the vessel and re-anastomose it back in an end to end fashion with interrupted stitches. During this time, each student was graded based on the NOMAT scale. Statistical analysis was performed using the SPSS software (IBM, Armonk, NY) using a linear regression model for criterion validity and Cronbach's Alpha test for internal consistency.

Results

Thirty one residents participated in the course. The Cronbach's Alpha score for the NOMAT was 0.939. Linear regression analysis revealed an adjusted R2 of 0.856 (p=0.001). Deviation of scores between residents of the same year was inversely related to PGY year of the group.

Conclusions

The NOMAT is further validated by a Cronbach's alpha score that suggests each item of the scale is important, and adjusted R2 score that suggests that the scale can reliably distinguish between levels of the different performance exhibited by residents at varying levels of training.

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	.925 ^a	.856	.851	3.29112	.856	172.240	1	29	.000

a. Predictors: (Constant), Training Level