

## IOWA PHYSICAL THERAPY ASSOCIATION 2005 POSTER PRESENTATION

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### Measures of Stress and Anxiety in Entry-Level Physical Therapy Students: Are they Related to Academic Performance?

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**PURPOSE/HYPOTHESIS:** This study investigated the relationship among measures of stress, anxiety, and academic performance in entry-level DPT students during the didactic portion of their curriculum. We hypothesized that DPT students would have higher stress and anxiety measures than their age and gender matched peers but there would be no significant difference between males and females or students in different years of the program. While a positive relationship was expected between the measures of stress and anxiety and academic performance, we did not necessarily expect to find a linear relationship.

**SUBJECTS:** 163 (117 females, 46 males) first- and second-year students from three professional DPT programs participated in the study.

**METHODS:** Subjects completed the State-Trait Anxiety Inventory, yielding separate state-anxiety (SAS) and trait-anxiety (TAS) scores, and the Perceived Stress Scale (PSS14). Total TAS, SAS and PSS14 scores were computed following published scale scoring directions. Undergraduate grade point average (UGPA) and the physical therapy education grade point average (DPTGPA) were obtained from program personnel.

**DATA ANALYSIS/RESULTS:** Descriptive statistics demonstrated that mean SAS and TAS scores for all subjects exceeded norms for working adults of similar age. PSS14 scores for all subjects were higher than normative values for age, and for students. Mann Whitney tests showed that SAS, TAS, and PSS scores for females were significantly higher than for males ( $p < 0.05$ ) and SAS scores for second-year students were significantly greater than for first-year students ( $p < 0.05$ ). Spearman correlation coefficients found moderate to high correlations ( $r_s = 0.602-0.705$ ) among the measures of stress and anxiety, but no significant relationship was found between these measures and UGPA or DPTGPA. Multiple linear regression analysis was used to determine the percentage of variability in perceived stress that could be explained by the other measures of anxiety and academic performance. TAS scores explained 60% of the variability in PSS14 in males while TAS and SAS explained 54.3% in females.

**CONCLUSIONS:** Stress and anxiety measures were correlated and higher in entry-level DPT students than age and gender matched peers. Higher mean stress and anxiety scores were found in female entry-level DPT scores compared to males, while state anxiety was higher in second-year students. Measures of stress and anxiety were not strongly associated with, nor could they be predicted, by measures of academic performance.

**RELEVANCE:** Limited information on stress in physical therapy students is available in the literature. Further studies comparing measures of stress and anxiety with measures of health quality in physical therapy students are needed. In addition, studies incorporating interventions may be helpful in fostering the development of stress management strategies and other related generic abilities within professional physical therapy programs.

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