The Relationship Between The Physical Therapist Clinical Performance Instrument Scores and Doctor of Physical Therapy Student Learning Styles

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Introduction

• Improving the quality of new DPT graduates elevates the profession as a whole.
• In order to accurately assess learning and development, DPT programs conduct a variety of standardized student assessments. Two of these are:
  • The PT Clinical Performance Instrument (PT CPI)
  • The Kolb Learning Styles Inventory (LSI) version 3.1

Study Purpose

• Identify relationships between DPT students’ preferred learning style as assessed by the Kolb LSI-3.1 and the change in their performance during full-time clinical experience as measured by the PT CPI.
• To provide information for directors and coordinators of clinical education, CIs, and students in selecting opportunities and instructional strategies that are best suited for each individual.

Methods

• Sample consisted of FGCU entry-level DPT students (n = 103); Class of 2012, 2013, 2014, and 2015.
• The research design utilized retrospective, cross-sectional, de-identified data previously obtained by FGCU faculty
  • DPT students and their clinical instructors completed the PT CPI online during each of 5 full-time clinical experiences.
  • The Kolb LSI-3.1 was completed in class during the DPT students’ first semester.

Results

• Developed in 1976 by David Kolb. Version 3.1 was the latest version available during data collection.
• Kolb believed that learning was a cycle between grasping experience and transforming it to practical use
  • To grasp experience, individuals use “Concrete Experience” and “Abstract Conceptualization.”
  • Transforming experience requires “Reflective Observation” and “Active Experimentation.”
• Although learning requires all 4 styles, the LSI uses questions to determine what combination is preferred:
  • Accommodator: prefers concrete experience with active experimentation
  • Diverger: prefers concrete experience with reflective observation
  • Converger: prefers active experimentation with abstract conceptualization
  • Assimilator: prefers reflective observation with abstract conceptualization

Data Analysis

• The Kruskal-Wallis one-way non-parametric analysis of variance was selected to examine the relationship between learning styles and CPI performance.
• PT CPI change scores were calculated for midterm to final for each of the 5 clinical experiences.
• PT CPI change scores were calculated for midterm from Clinic I to Clinic III (beginning of the curriculum) and from Clinic III to Clinic V (end of the curriculum).
• Descriptive analyses of data included frequency counts, percentages, as well as means, and standard deviations (where applicable) regarding number of participants, distributions of learning styles, CPI scores, and clinic types.

Discussion

• Mean PT CPI scores tended to increase over the progression of clinical experiences, but change scores from midterm to final decreased. This suggests that DPT students have a steeper learning curve earlier in the clinical education.
• None of the results returned from the Kruskal-Wallis tests of the 3 main research questions were under the p value (p= 0.05) which indicates that there is no statistical relationship between learning styles and progression of clinical proficiency in DPT students.

Conclusions

• This study shows that there is no statistically significant difference in students’ progression in clinical performance during entry-level DPT education when compared with student learning styles.
• This information is valuable because it shows that students of all learning styles have an equal opportunity for clinical success.
• Future research may wish to consider whether learning preferences change throughout the PT curriculum, and whether ongoing assessment of learning styles has any impact on clinical performance as measured by the PT CPI.