



The Seven Roles of Essential Competencies Mapped through Physical Therapy Clinical Education

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Introduction

The purpose of this study was to evaluate change in MPT students' essential competencies during clinical placements.

Objectives:

1. To map the Physical Therapist Clinical Performance Instrument (PT-CPI) to the seven Physical Therapist Roles
2. To determine if the essential competencies of MPT students change during clinical placements
3. To estimate which Physical Therapist Role(s) demonstrate the greatest change from the first to sixth clinical placement

Study population and tools:

UBC Masters of Physical Therapy (MPT) students

- Completed 26-month program with 6 five-week clinical placements

Physical Therapist Clinical Performance Instrument 1997 (PT-CPI)¹

- Used by clinical instructors to evaluate MPT students' performance
- Used a Visual Analogue Scale (VAS) for the 24 Performance Criteria

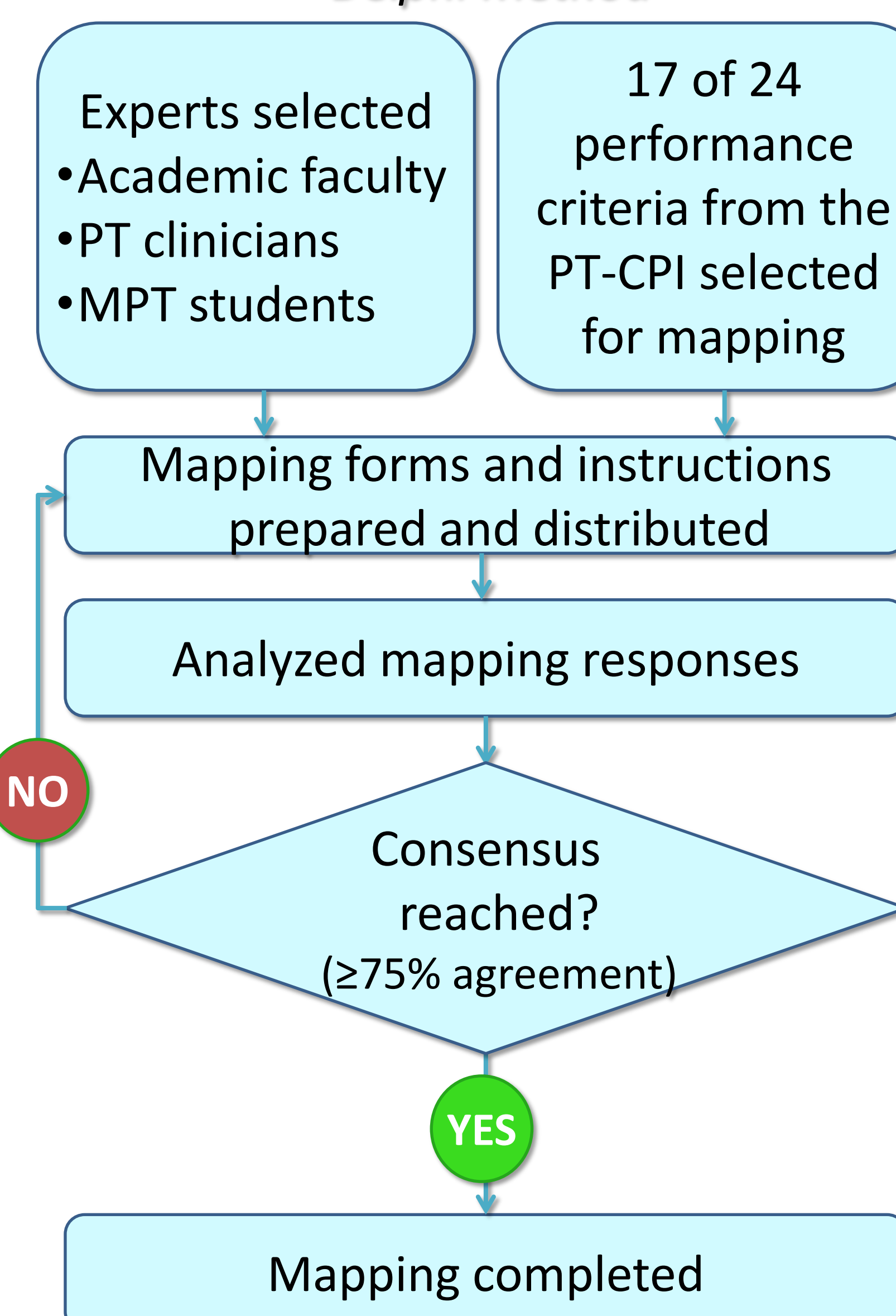
Essential Competency Profile for Physiotherapists in Canada 2009 (ECPPC)²

- Described 7 Roles in which PTs must demonstrate competence

Methods

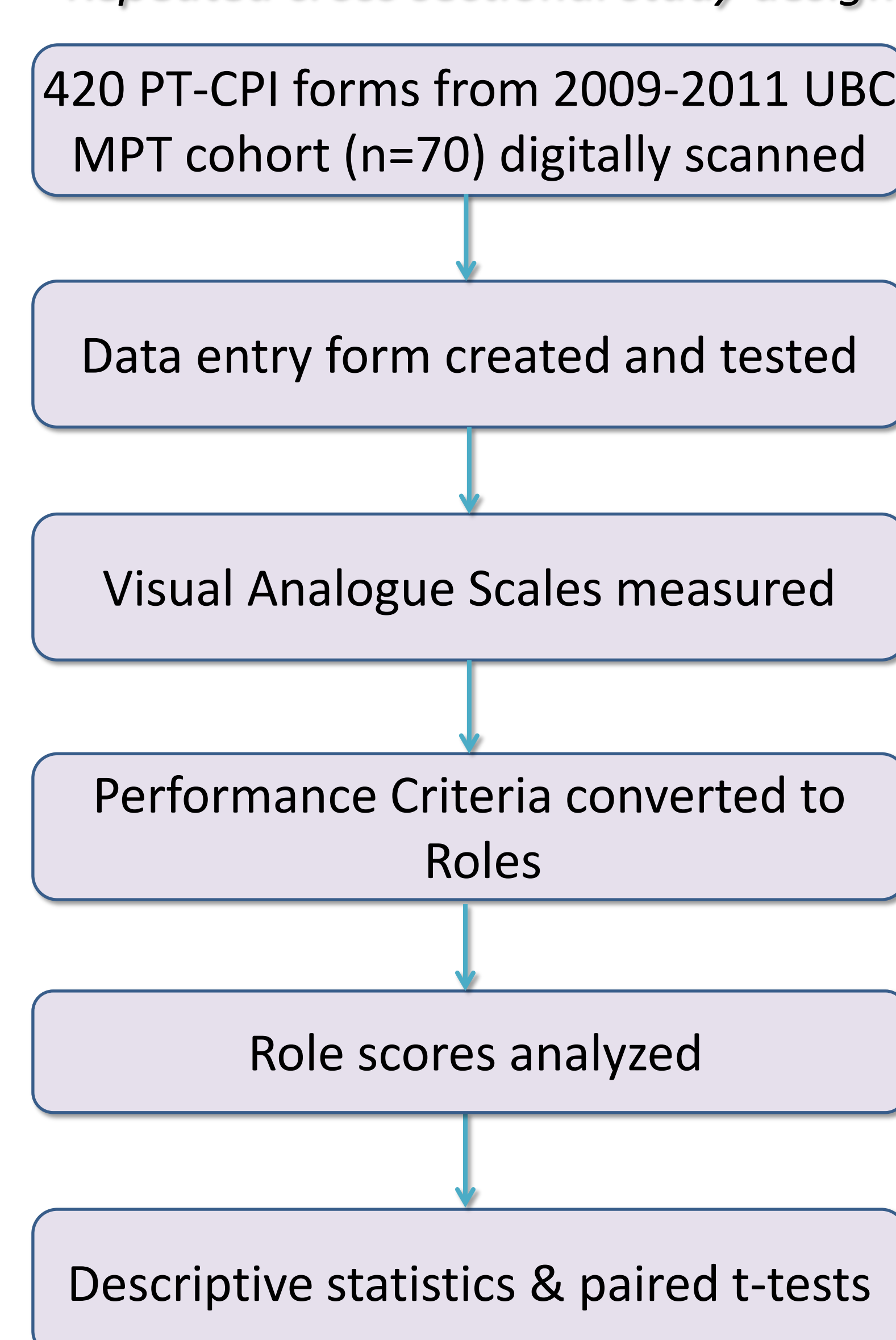
Phase 1: Mapping of PT-CPI Performance Criteria to PT Roles

Delphi Method



Phase 2: Determining Change in Essential Competency

Repeated cross sectional study design



Results

Phase 1: Mapping

Participants (n= 19)

- Academic faculty (n= 5)
- PT clinicians (n= 9)
- MPT students (n= 5)

2 rounds to reach consensus

Phase 2: Determining Change

381 PT-CPI forms from students (n=65) were analyzed

Inter-rater reliability for data entry
Cronbach's alpha = 0.98

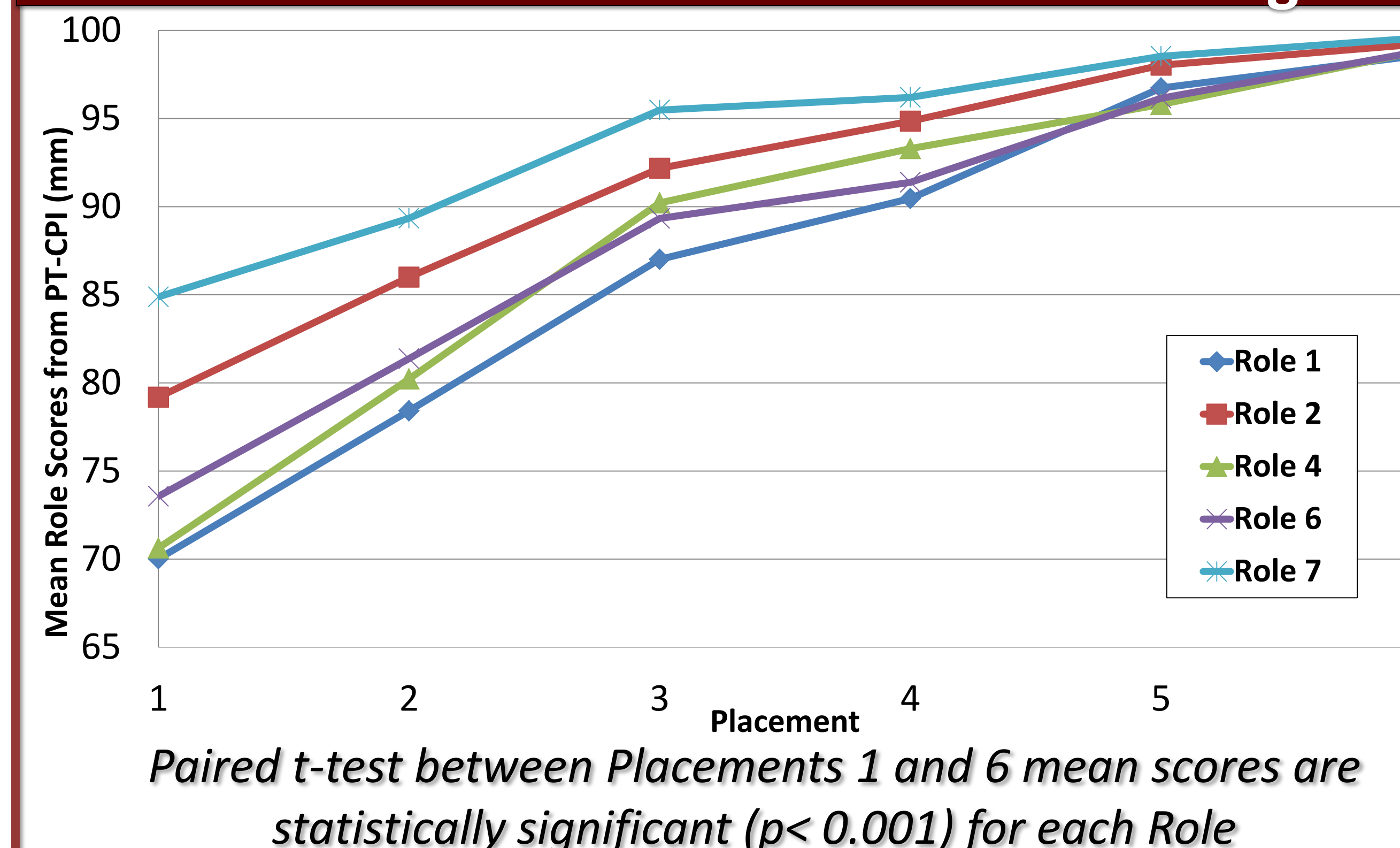
17 Performance Criteria of the PT-CPI Mapped to the 7 Roles of Essential Competencies

Role 1: Expert	Role 2: Communicator	Role 3: Collaborator	Role 4: Manager	Role 5: Advocate	Role 6: Scholarly practitioner	Role 7: Professional
1. Safety*	3. Professional Behaviour*		19. Resource Management		9. Critical Inquiry	1. Safety*
9. Critical Inquiry	6. Communication				23. Career Development	2. Responsible Behaviour*
11. Examination	7. Documentation					3. Professional Behaviour*
12. Evaluation/ Dx/Prognosis	8. Individual/ Cultural Differences					4. Ethical Practice Standards*
13. Plan of Care	15. Education					5. Legal Practice Standards*
14. Treatment/ Intervention						22. Professional/ Social Responsibility

Legend:

- Consensus Met ($\geq 75\%$)
- Consensus Not Met ($<75\%$)
- Performance Criteria (PC) that were mapped to Roles
- * = Red Flag Items from PT-CPI
- PC# = PC mapped to several Roles
- PC# = PC mapped to only one Role

Mean Role Scores for Placements 1 through 6



Mean Difference in Role Score, Placement 1 to 6

Role Pairs	Mean difference (mm)	SD	P
Role 1 vs. Role 2	9.23 (95% CI 6.98 – 11.47)	17.41	< 0.001
Role 1 vs. Role 4	10.47 (95% CI 5.79 – 15.15)	15.94	< 0.001
Role 1 vs. Role 6	3.12 (95% CI 1.24 – 7.49)	20.34	0.158
Role 1 vs. Role 7	12.79 (95% CI 10.32 – 15.25)	20.23	< 0.001
Role 2 vs. Role 4	17.13 (95% CI 12.01 – 22.25)	18.02	< 0.001
Role 2 vs. Role 6	10.67 (95% CI 6.66 – 14.67)	19.12	< 0.001
Role 2 vs. Role 7	5.47 (95% CI 3.25 – 7.70)	16.88	< 0.001
Role 4 vs. Role 6	0.35 (95% CI 4.58 – 5.29)	16.80	0.886
Role 4 vs. Role 7	10.47 (95% CI 5.79 – 15.15)	15.94	< 0.001
Role 6 vs. Role 7	12.27 (95% CI 8.82 – 15.72)	16.58	< 0.001

Discussion

Objective 1:

Performance criteria were not equally distributed across Roles:

- There was an over- or under-representation for specific Roles
- Performance criteria may be redundant and/ or they may be comprehensive in capturing different aspects of the Roles
- Roles 3 and 5 were not represented:
- PT-CPI does not inform whether students gained competency in these Roles

Objective 2:

All Roles changed significantly ($p= 0.05$)

- Clinical education may have a positive change in MPT students' essential competencies
 - Similar trends of improvement in mean scores across the 5 Roles
- Greatest improvement from placement 1 to 3, with little variation from placement 3 to 6
- PT-CPI and/ or clinical placements may have a ceiling effect^{3,4,5}

Objective 3:

Role 1 showed greatest change in competency

- Involves clinical skills that are developed throughout clinical education
- Roles 2 and 7 showed the least change in competency
- Encompass attributes developed prior to placement 1
- Role 1 had statistically significant change in competency as compared to Roles 2 and 7
- Clinical education may help students to improve specific Roles more than others

Conclusions

Clinical placements enhanced the students' essential competencies in 5 Physical Therapist Roles.

PT-CPI may not capture students' performance across all Roles.

PT-CPI may require revision to align with the ECPPC.

References

1. American Physical Therapy Association. *Physical Therapist Clinical Performance Instrument*. 4th ed. Alexandria, VA: American Physical Therapy Association; 1997.
2. National Physiotherapy Advisory Group. *Essential Competency Profile for Physiotherapists in Canada*. 2009.
3. Proctor PL, Dal Bello-Haas VP, et al. Scoring of the physical therapist clinical performance instrument (PT-CPI): analysis of 7 years of use. *Physiotherapy Canada*. 2010;62(2):147-154.
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5. Adams CL, Glavin K, et al. An evaluation of the internal reliability, construct validity, and predictive validity of the physical therapist clinical performance instrument (PT CPI). *J Phys Ther Educ*. 2008;22(2):42-50.