

# Identifying the Impact of a Designated Education Unit Experience on Clinical Reasoning in Associate Degree Nursing Students

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## Background

- Development of clinical reasoning in NLNs-demonstrated as decision making in practice
- Seamless transition-IOM recommendations for realistic clinical experiences
- DEU-variety of models, outcomes assumed but not well documented
- Critical Thinking research-imperative in nursing for successful practice; rarely measured
- Advisory Board-Critical Thinking Diagnostic developed for use in variety of skill levels
- Outcomes for DEU in respect of impact on critical thinking not found

## Purpose

The purpose of this project is to identify the impact of the DEU experience on Associate Degree nursing students critical thinking ability.

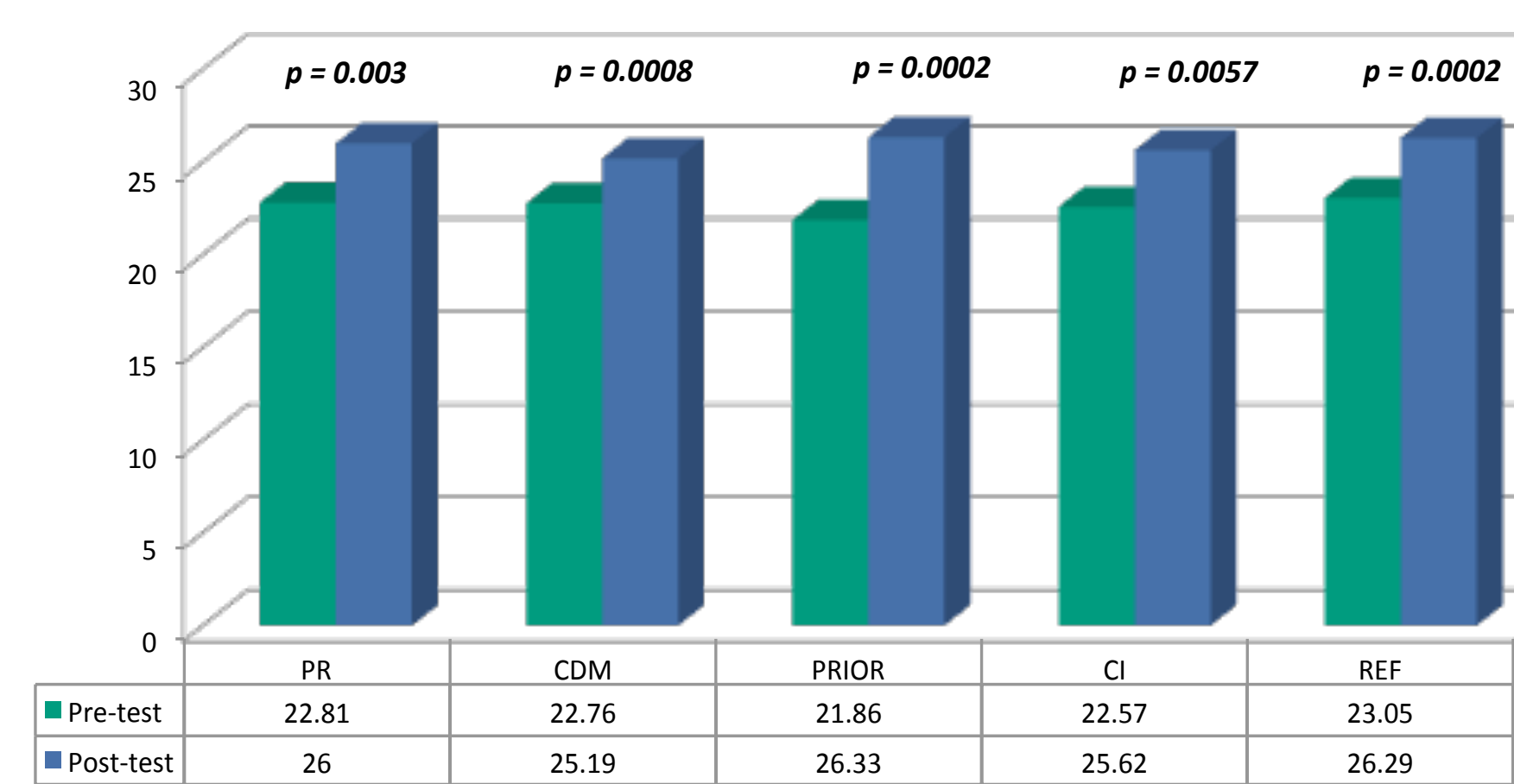
## Design

Longitudinal study of repeated measures with Pre-and-Post Assessment of student groups in an Associate Degree (AD)nursing program. IRB approval obtained.

## Critical Thinking Diagnostic Tool

- Advisory Board Company Nursing Executive Center's Critical Thinking Diagnostic (CTD)tool
- 25 item tool reflecting critical thinking components; 1-6 likert scale for self-assessment
- Objectively measures the student's performance on five areas noted to be components of critical thinking:
  - Prioritization
  - Problem Recognition
  - Clinical Decision making
  - Clinical Implementation
  - Reflection

DEU Students: Pre/Post Mean Scores by Category



Key: PR=Problem Recognition, CDM=Clinical Decision Making, PRIOR=Prioritization, CI=Clinical Implementation, REF=Reflection

## Methods

- Student groups within course with a DEU experience
- All students given the opportunity to participate
- All students of three identified nursing courses given the Critical Thinking Diagnostic at the beginning of the semester
- Repeated measure at the end of the semester with identification if the student participated in DEU or a regular clinical experience
- Total time for study is 2 academic years or 4 semesters
- All data was analyzed using SPSS (IBM)

## Preliminary Results

- Total N after data cleaning = 72 participants
- DEU participants (intervention group) = 21
- Non-DEU clinical experience (control group)= 51
- Overall Mean Pre & Post Scores: P value <.005
  - Significant increase in overall mean scores for the DEU students
  - No significant difference in overall mean scores for the non-DEU students
- Paired T-Test Results: P value <.005
  - In DEU students--All 5 categories were shown to have a demonstrated and significant increase from the measurement
  - In Non-DEU students only 2 of 5 categories had significant increases: Clinical Implementation and Reflection

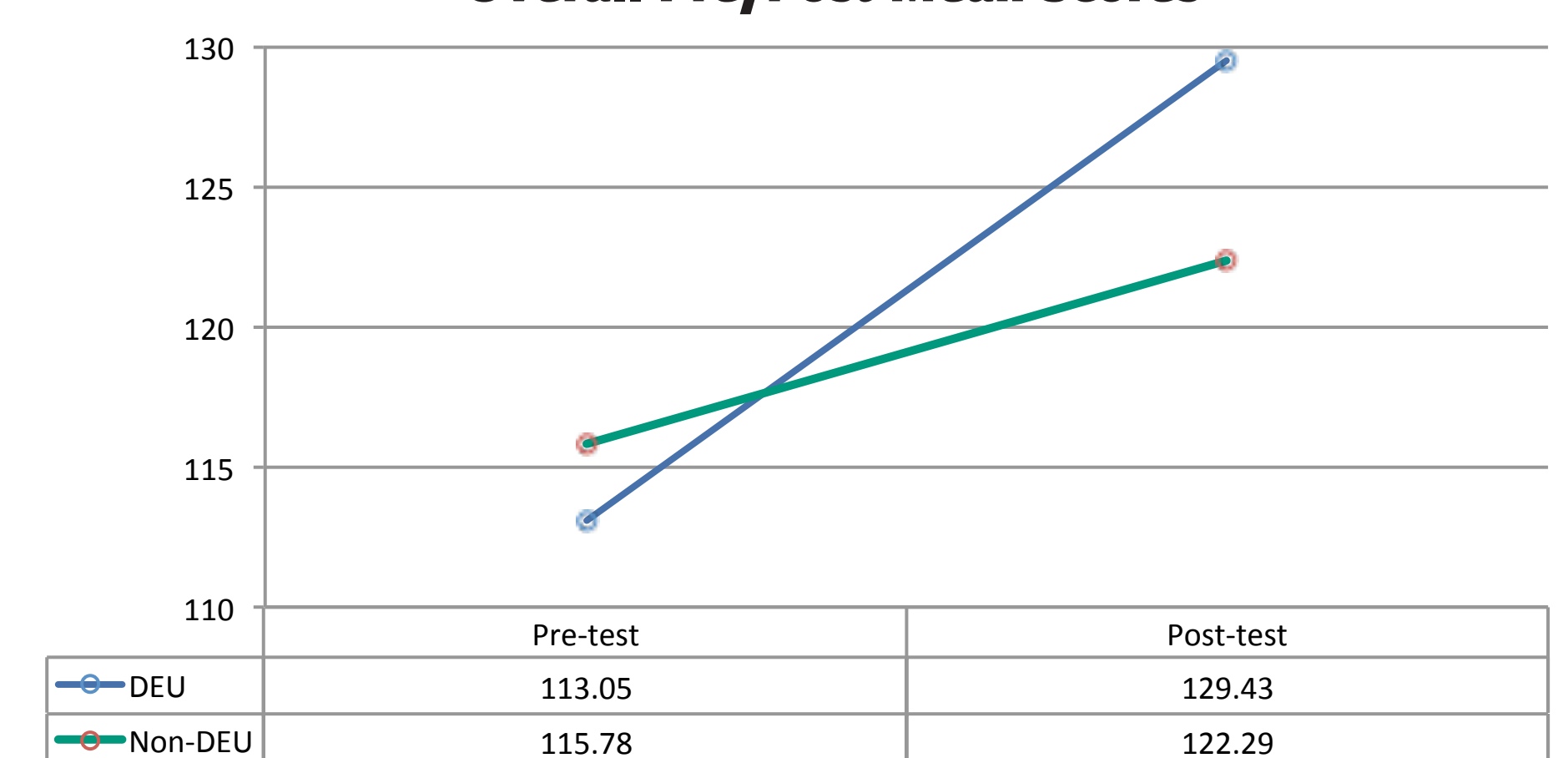
In running the ANOVA on this preliminary data, there is no statistically significant effect of DEU intervention on Nursing Assessment scores [F (1,70) = 3.192, p = 0.078].

In running the ANCOVA on this preliminary data, there was no statistically significant effect of DEU intervention on Nursing Assessment Post scores after controlling for pre-test scores [F (1,69) = 2.545, p = 0.115].

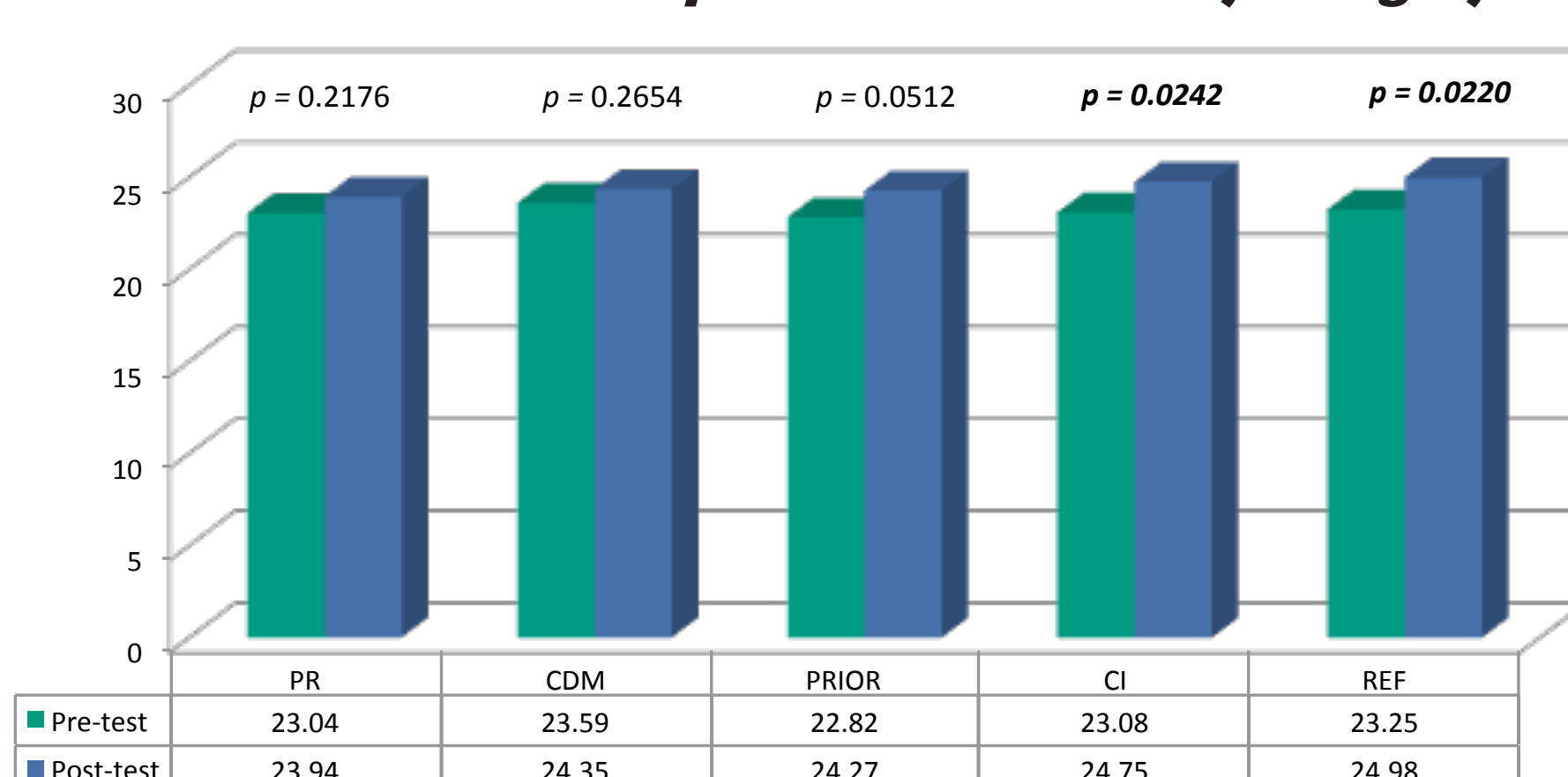
## Discussion

- Longitudinal 2 year study- interim data analyzed for first 72 participants (21 intervention; 51 control)
- Significant increase in overall total scores for intervention group—not control group
- Significant change in critical thinking scores in all categories for intervention group
- Significant change in two of five categories for control group
- Insufficient data to demonstrate significant change between intervention and control groups; however the overall total mean score for intervention students was higher as compared to the control group
- Future implications: Over next two years will explore if the difference is due to the intervention

Overall Pre/Post Mean Scores



Non-DEU Students: Pre/Post Mean Scores by Category



Key: PR=Problem Recognition, CDM=Clinical Decision Making, PRIOR=Prioritization, CI=Clinical Implementation, REF=Reflection



Hallmark Health System