

# Construct Validity & Reliability of a Concussion Assessment Tool Measuring Concussion Knowledge on Diagnosis and Management

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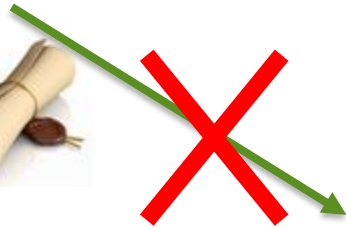
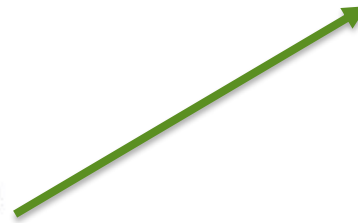
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# Overview

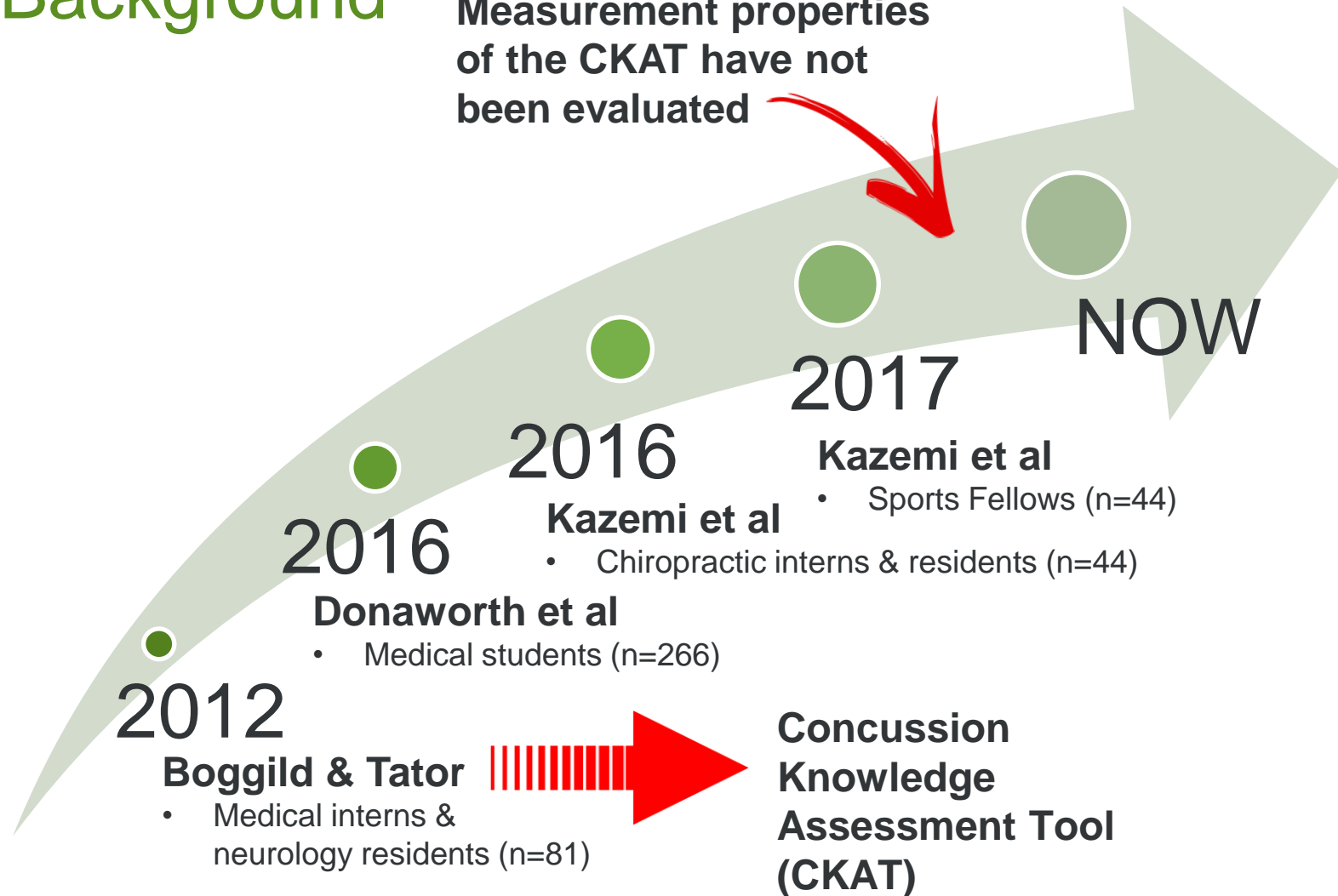
- Background
- Research Question & Hypothesis
- Methodology
- Results
- Conclusions & Clinical Implications

# Background



# Background

Measurement properties  
of the CKAT have not  
been evaluated

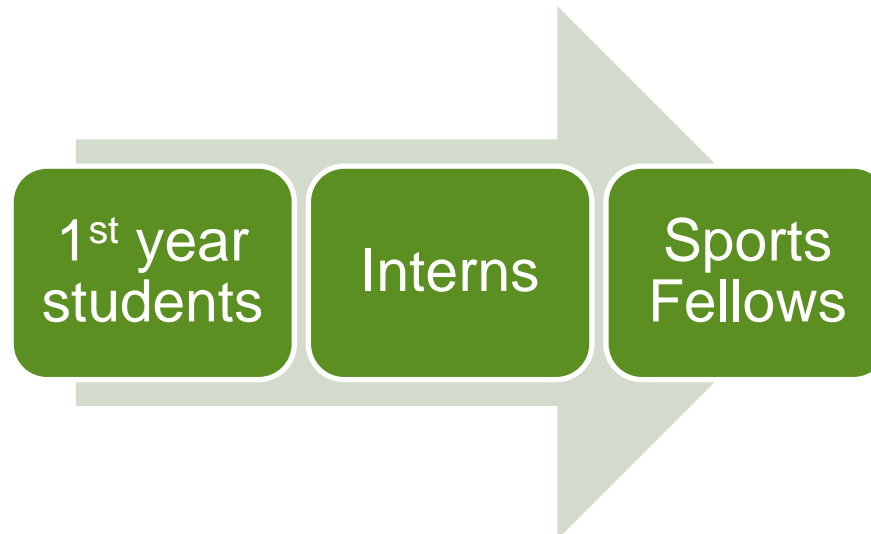


# Research Questions

1. What is the **construct validity** of a modified version of the **CKAT** for measuring knowledge of **concussion diagnosis and management**?
2. What is the **test-retest reliability** of the modified **CKAT**?

# Hypothesis

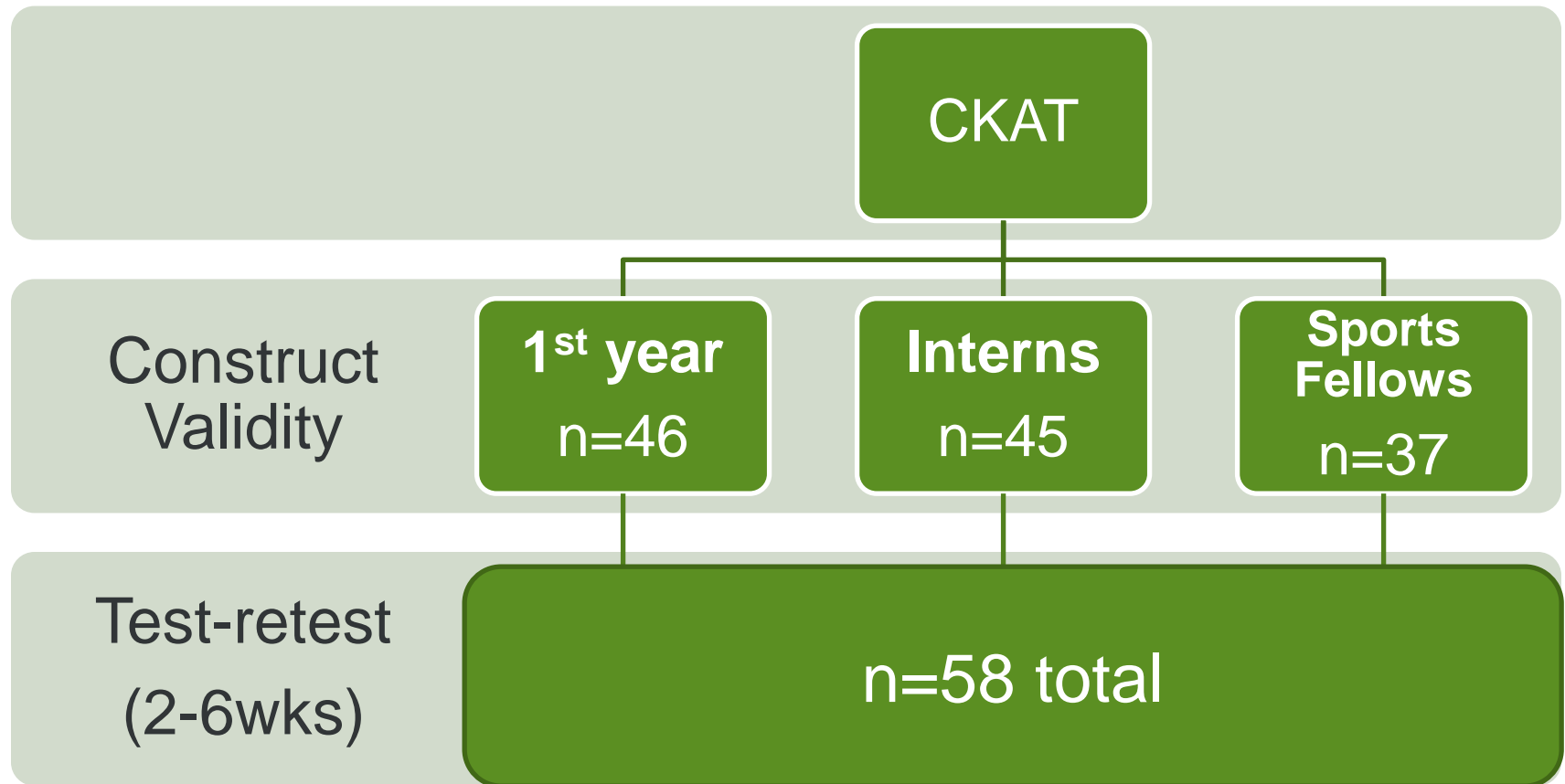
- The modified CKAT will adequately be able to **distinguish a difference in concussion knowledge scores between groups**, and also to demonstrate adequate reliability over a repeated measure.



# Outcome Measurement

- Modified CKAT
  - 26 item tool
    1. 8 MCQ - Demographic data, education, lifestyle
    2. 9 MCQ – Concussion dx./management knowledge
    3. 8 MCQ - Past experience & preferred learning format
    4. \*1 Open Field Q - “Any changes you recommend to the CKAT as a result of newer research?”
  - 2 scoring methods
    - Original (out of 9)
    - Modified (out of 49)

# Study Flow Diagram

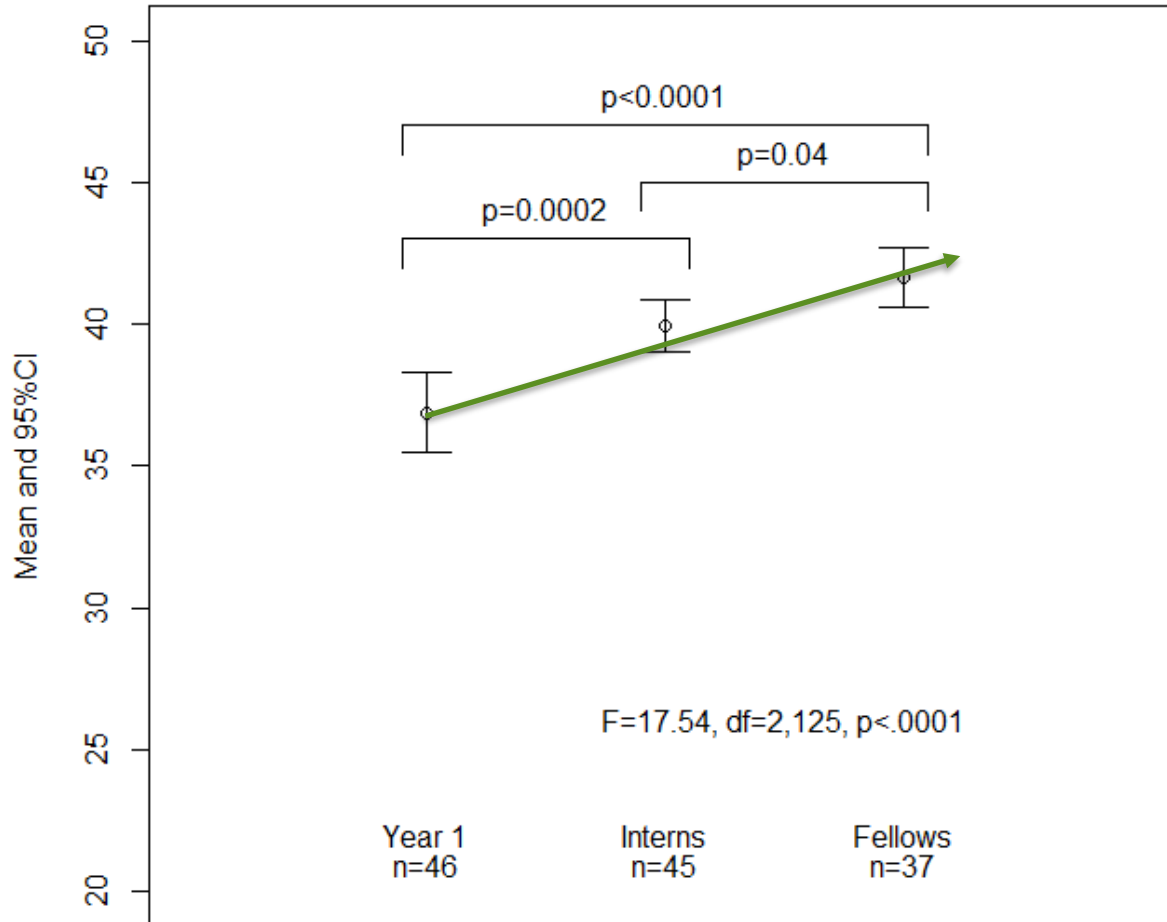




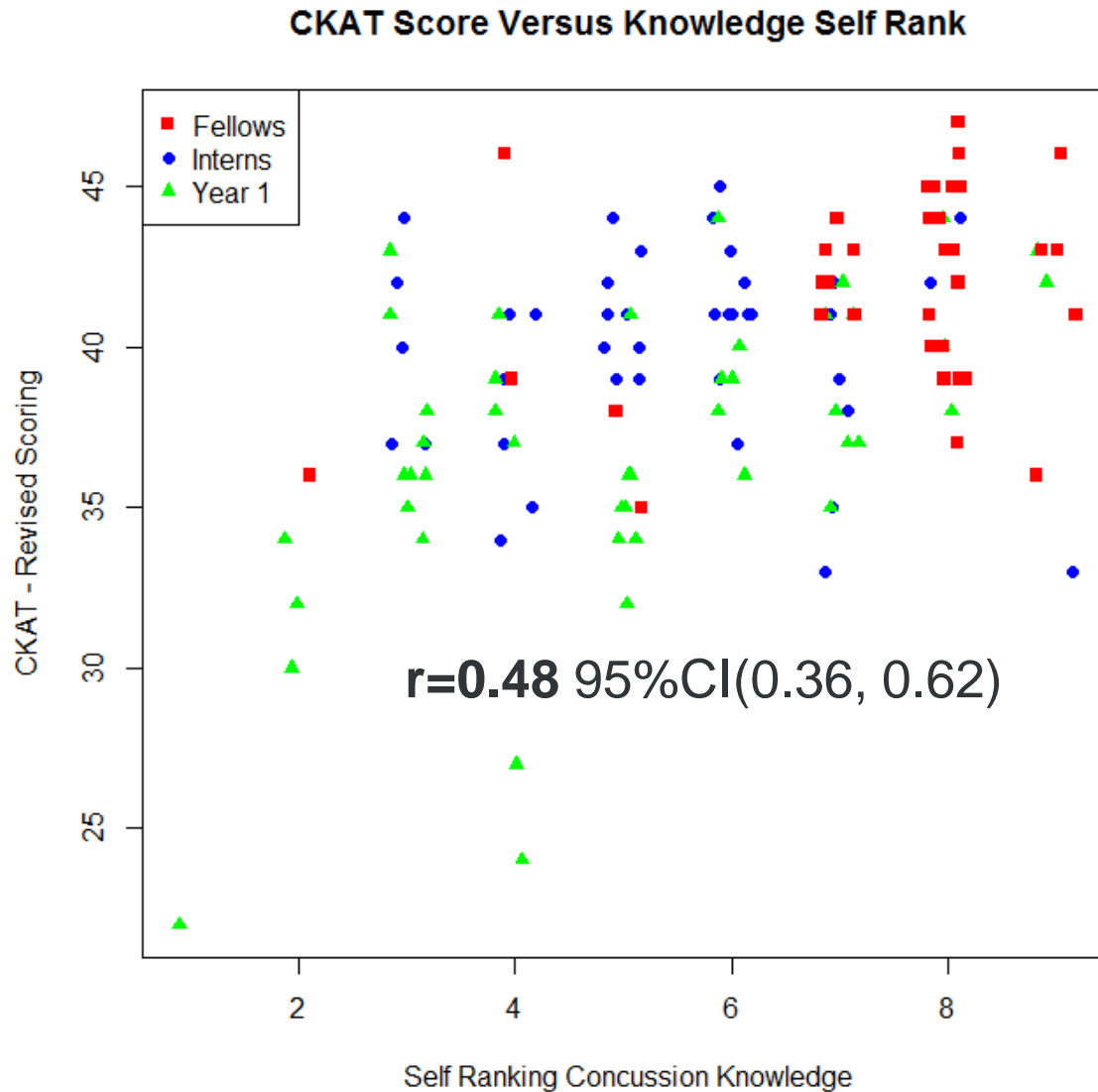
# Results

# Results – Construct Validity

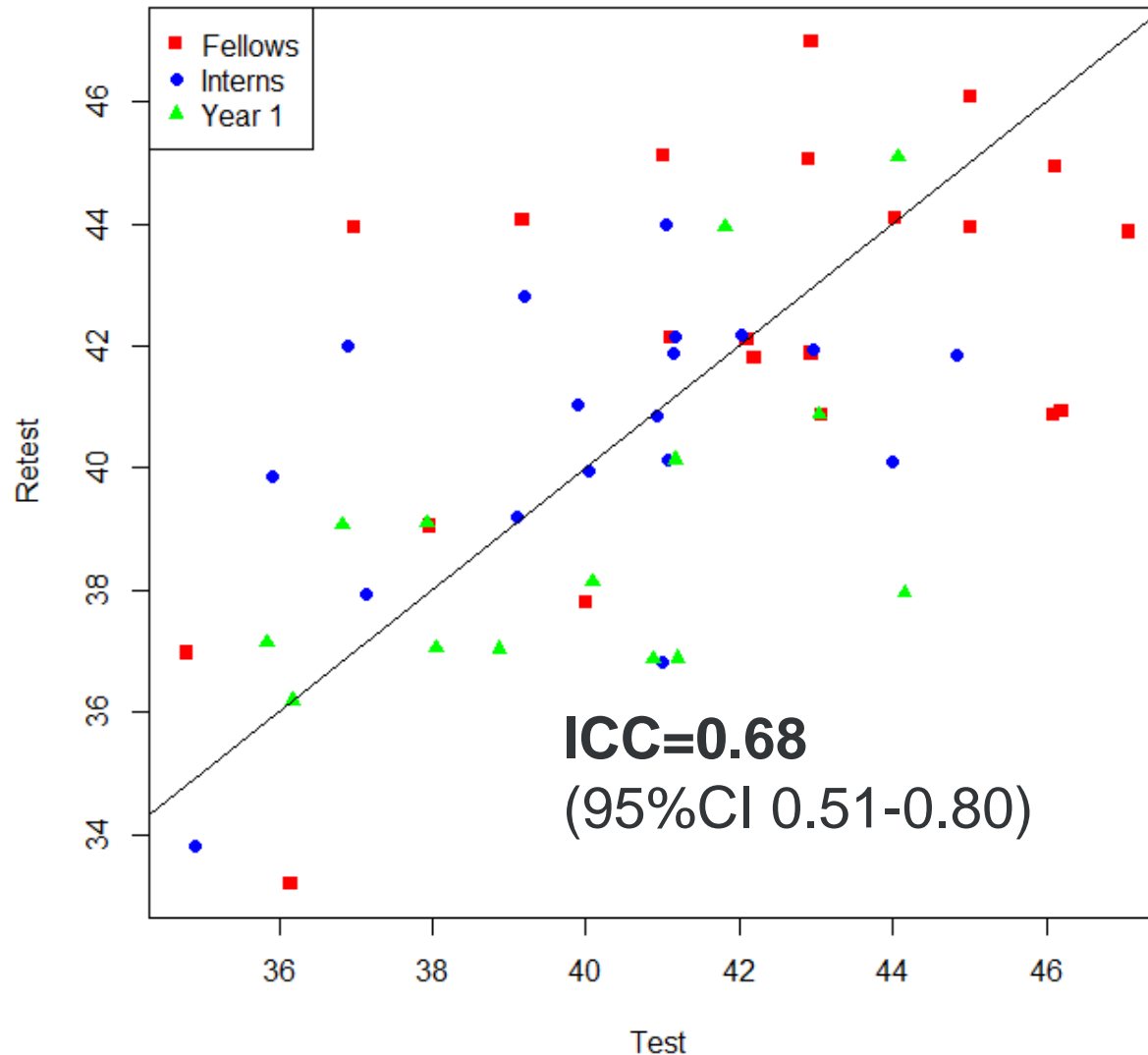
CKAT Revised Scoring



# Results – Construct Validity



# Results – Test-Retest Reliability



# Limitations

- Limited to chiropractic profession
- CKAT based on outdated guideline
- Couldn't control for respondents looking for answers in between trials
- Respondent bias
- Different washout period between respondents
- Variability within groups

# Take Home

- Provided evidence to support construct validity
  - Distinguished between chiropractic subgroups as hypothesized
  - Correlated moderately with Concussion Knowledge Self-Ranking
- CKAT was not able to achieve adequate test-retest reliability (0.7) using either scoring method
  - Modified scoring came close with a 0.68

# The Future

- Measure concussion knowledge with some confidence
- Build a framework for future CKAT's
  - Re-examine psychometric properties using latest consensus statement