Returning to Learn Post-Concussion: Invisible Struggles of an Invisible Injury

A Phenomenological Investigation of College Student Experiences

The Issue: Academic Challenges

- Symptoms
- Initial steps
- **Self-advocacy**
- Resource awareness
- Symptom management- no protocol
  - ADA Constraints

ADA AMERICANS WITH DISABILITIES ACT

"(A) An individual meets the requirement of 'being regarded as having such an impairment' if the individual establishes that he or she has been subjected to an action prohibited under this Act because of an actual or perceived physical or mental impairment whether or not the impairment limits or is perceived to limit a major life activity.

"(B) Paragraph (1)(C) shall not apply to impairments that are transitory and minor. A transitory impairment is an impairment with an actual or expected duration of 6 months or less.

The Current Study

Research Aims

- Student experiences
- Student care pathways
- Possible avenues of improvement

Qualitative Design

- Phenomenology
  - Emergent hypothesis
  - Holistic description of phenomena
  - Commonalities among participants

Data Collection and Sample

Participants

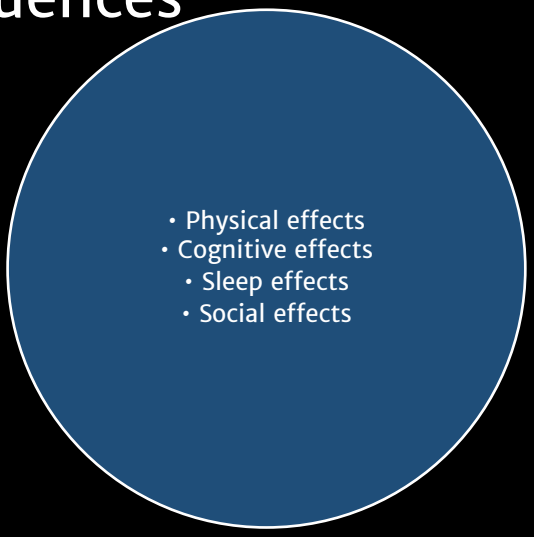
- Purposefully selected
  - Non-athletes
- 1 male, 11 females
  - Colvin et al., 2009
  - Harmon et al., 2016
- Various academic levels
-

Data Collection

- Academic dysfunction survey (Wasserman et al., 2017)
- Learning and Study Strategies Inventory (LASSI; Weinstein et al., 2016)
- Semi-structured interviews
- Audio recorded

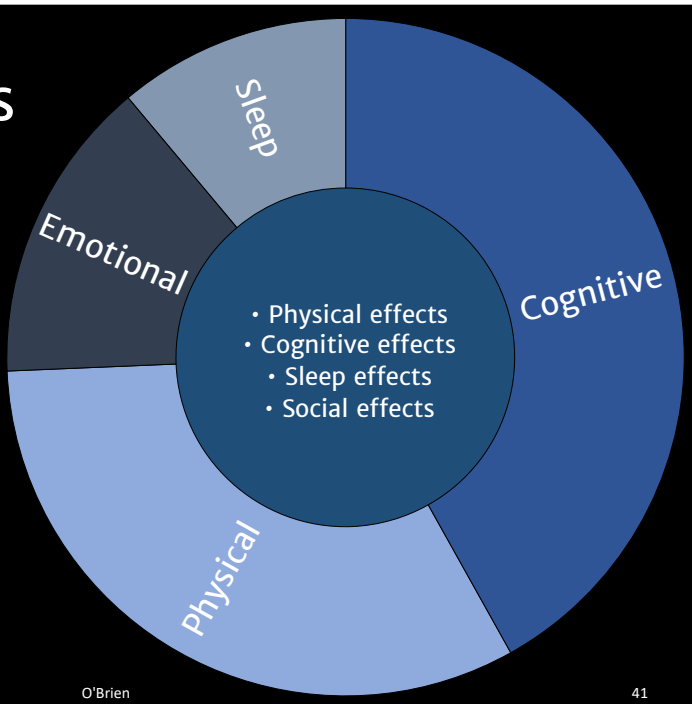
Aim 1: To Describe College Student Experiences of Concussion

Concussion Consequences



Academic Effects

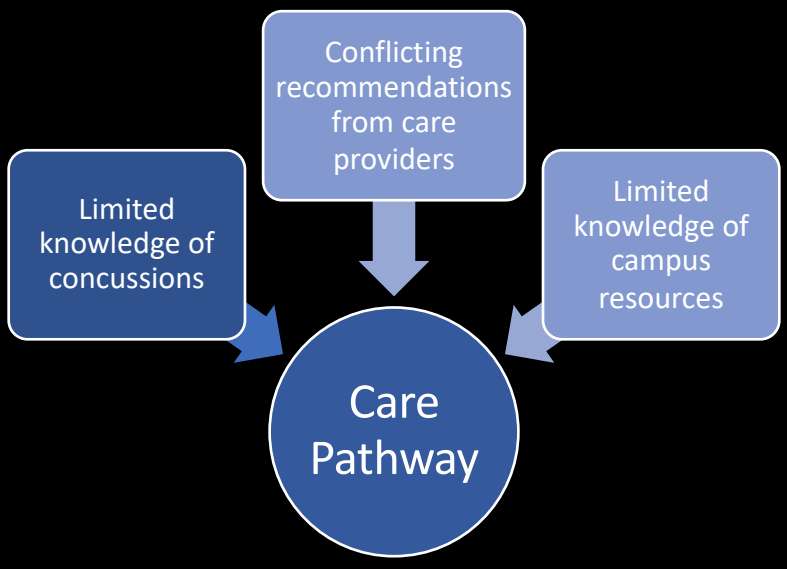
- Primarily cognitive effects
  - 11 students
  - 49 statements
- Physical effects
  - 7 students
  - 38 statements



Aim 2: To Describe Student Care Pathways Following Concussion

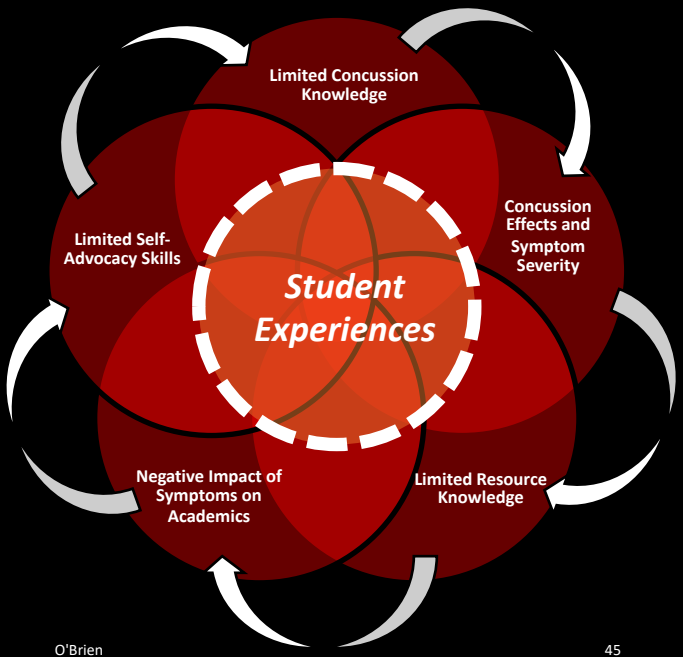
Pathways of Care

- 10 sought care
- 4 sought immediate care on recommendation of someone else
- 4 delayed care (+48 hours post)
- 8 received imaging
- 3 to urgent cares
- Others to ER or MD
- 2 thought they could manage on their own



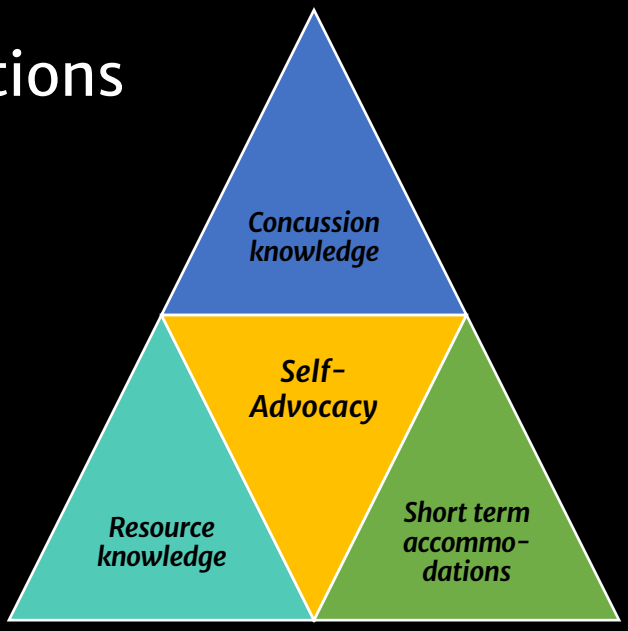
Interaction Effect

- *Interaction* of factors & impact on RTL
- Contributions to experience + student reaction
- Recommendations generated from experiences

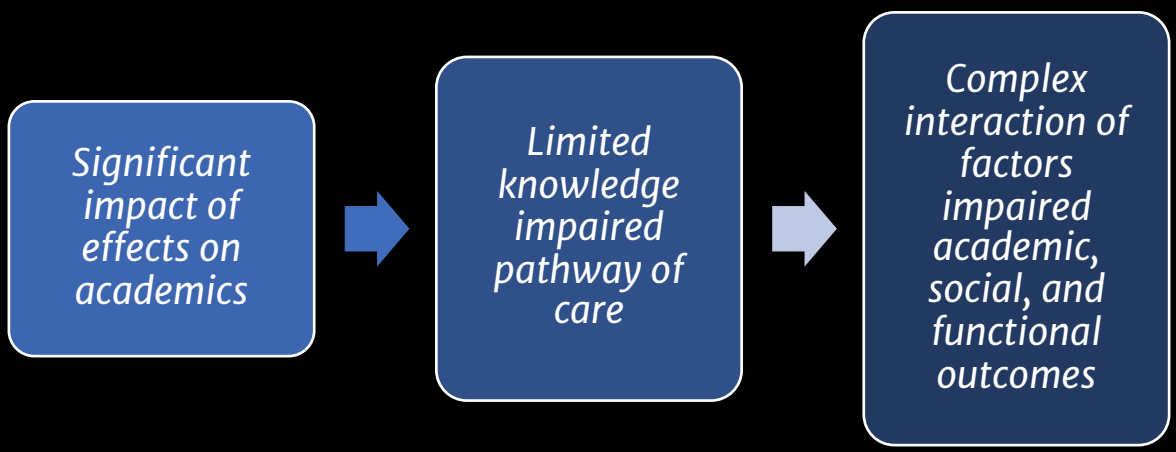


Aim 3: To Identify Avenues to Improvement of Care for Students with Concussion on Campus

Recommendations

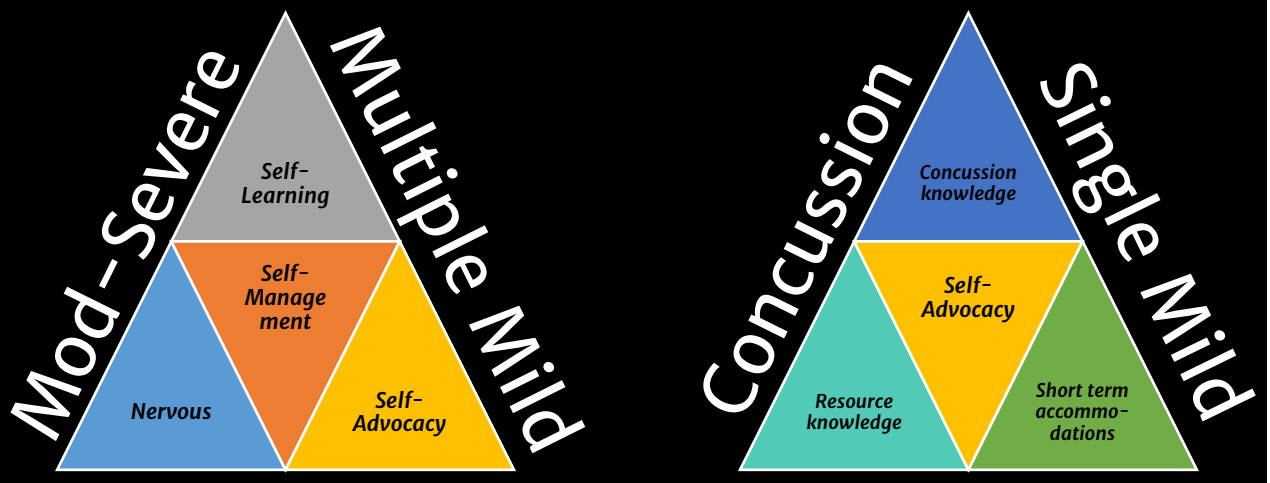


Conclusions and Implications

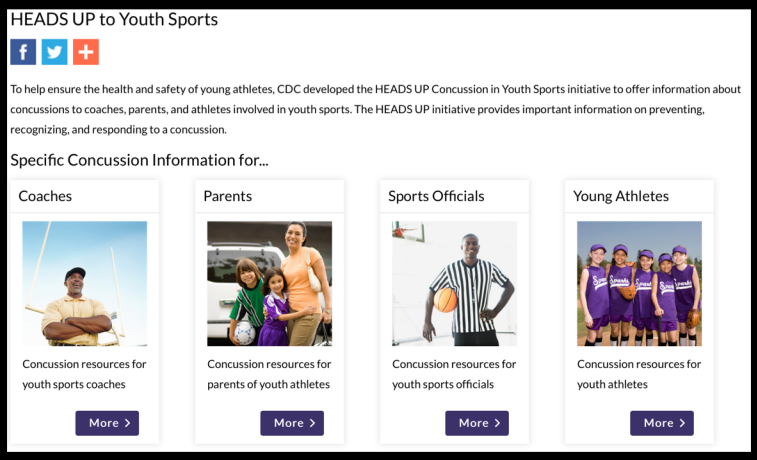


Return to Learn: What Now?

Two Populations of Learners

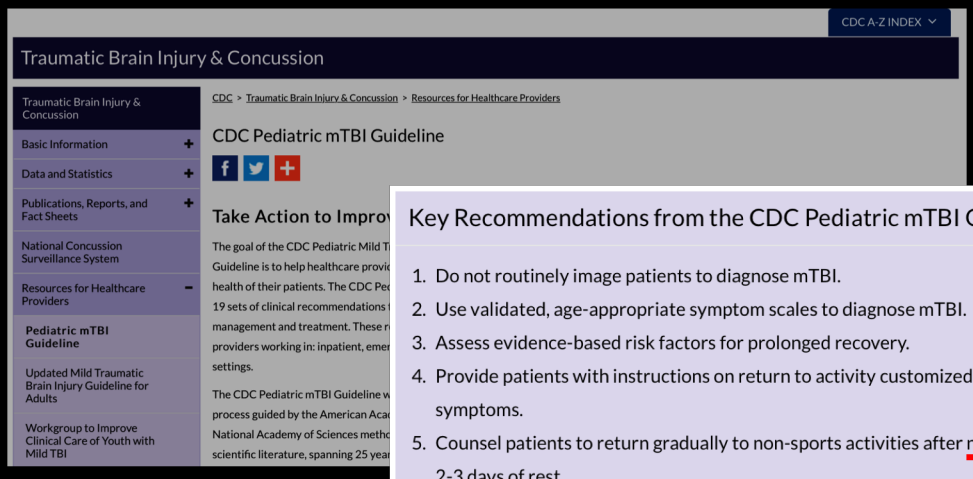


CDC HEADS UP



https://www.cdc.gov/headsup/youthsports/index.html

CDC Pediatric mTBI Guidelines

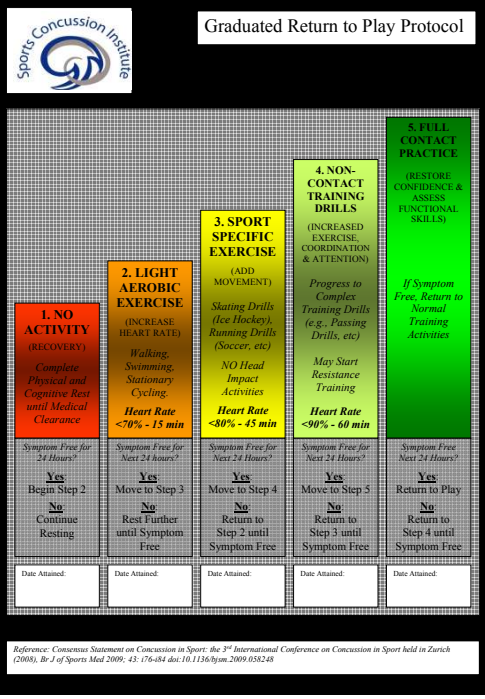


Key Recommendations from the CDC Pediatric mTBI Guideline:

1. Do not routinely image patients to diagnose mTBI.
2. Use validated, age-appropriate symptom scales to diagnose mTBI.
3. Assess evidence-based risk factors for prolonged recovery.
4. Provide patients with instructions on return to activity customized to their symptoms.
5. Counsel patients to return gradually to non-sports activities after no more than 2-3 days of rest.

Return to Play

- Five step progression
- No activity to full activity
- Progress through each step unless symptoms return
- Return to previous step, wait 24 hours and repeat
- *Based on symptom reporting*



Ret

Step 1. **Total rest.**	• No mental exertion (computer, texting, video games, or homework), stay at home, no driving.
Step 2. **Light mental activity.**	• Up to 30 minutes of mental exertion but no prolonged concentration, stay at home, no driving. • Progress to next level when able to handle 30 minutes of mental exertion without worsening of symptoms.
Step 3. **Part-time school.**	• Maximum accommodations (shortened day/schedule, built-in breaks, provide quiet place for mental rest, no significant classroom or standardized testing, modify rather than postpone academics, and provide extra time, extra help, and modified assignments). • Progress to next level when able to handle 30–40 minutes of mental exertion without worsening of symptoms.
Step 4. **Part-time school.**	• Moderate accommodations (no standardized testing, modified classroom testing, moderate decrease in extra time, help, and modification of assignments). • Progress to next level when able to handle 60 minutes of mental exertion without worsening of symptoms.
Step 5. **Full-time school.**	• Minimal accommodations (no standardized testing, but routine testing ok; continued decreasing extra time, help, and modification of assignments; might require more supports in academically challenging subjects). • Progress to next level when able to handle all class periods in succession without worsening of symptoms AND medical clearance is given for full return to academics.
Step 6. **Full-time school.**	• Full academics with no accommodations (attends all classes, full homework).

https://cbirt.org/back-school

Effect of Cognitive Activity Level on Duration of Post-Concussion Symptoms

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WHAT'S KNOWN ON THIS SUBJECT: Cognitive rest is recommended for the management of sport-related concussions. There are limited data to support this recommendation.

WHAT THIS STUDY ADDS: This study adds empirical data supporting the recommendation for cognitive rest after a sport-related concussion.

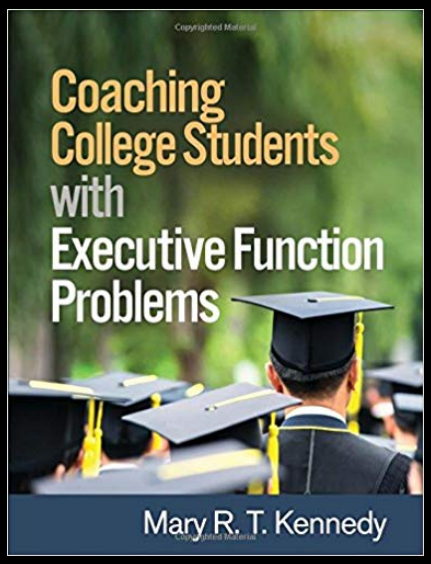
TABLE 1 Cognitive Activity Scale

0	Complete cognitive rest	No reading, homework, text messaging, video game playing, online activity, crossword puzzles, or similar activities. The most stimulating activities at this level would be watching television, watching movies, or listening to music.
1	Minimal cognitive activity	No reading, homework, crossword puzzles, or similar activities. Less than 5 text messages per day, less than 20 min per day combined of online activity and video games.
2	Moderate cognitive activity	Reading less than 10 pages per day, less than 20 text messages per day, and doing less than 1 h combined of homework, online activity, and video games per day.
3	Significant cognitive activity	Reading less, doing less homework, working less online, text messaging less, and doing crossword or other activities than you would normally do, but more than listed in level 2.
4	Full cognitive activity	You have not limited cognitive activity at all.

Patients were given the following instructions: "Cognitive activities are those activities which require you to think harder than usual. Homework, reading, playing video games, text messaging, doing crossword puzzles, playing trivia games and working online are all forms of cognitive activity. Below is a scale, from 0-4, of various levels of cognitive activity. Using the scale, please circle the average level of cognitive activity you have participated in since your last visit."

Current Work

- Coaching has been manualized for other researchers' and clinicians' use (Kennedy, 2017)
- Developing coaching program at UGA to support students with concussion and TBI



Monitoring Over Time

Andee's ARMY
Child Brain & Spinal Cord Foundation

SUCCESS

Success in College after Concussion with Effective Student Supports

Our goal is to develop a peer mentoring program for college students seeking care at Shepherd Center's Complex Concussion Clinic (CCC) that supports short and long term success.

Acknowledgments

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