

# Is Health Literacy Associated with Concussion Care Seeking Intentions and Behavior in Collegiate Students?

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## Introduction

- Individuals who sustain a concussion but do not seek care can experience greater symptom burden and prolonged recovery<sup>1,2</sup>
- Health literacy** is defined as the degree to which individuals can access, comprehend, appraise, and apply rudimentary health information and seek care for health choices<sup>3</sup>
- Concussion educational interventions have focused on increasing concussion knowledge,<sup>4</sup> however if one's health literacy is inadequate these interventions may not increase concussion knowledge nor influence one in seeking care for a suspected concussion
- It is currently unknown if health literacy is associated with concussion care seeking

## Purpose

- The purpose of this study was to determine if health literacy predicts concussion care seeking intentions and behavior

## Methods

- General college-aged students were recruited from a convenience sample to complete this cross-sectional survey from one large public institution
- Respondents completed the following survey sections (Table):
  - Brief Health Literacy Screening Tool (BRIEF)
    - Categorized as "inadequate" (scores 4 to 12), "marginal" (score 13 to 16), and "adequate" (scores 17 to 20)
- Concussion care seeking intentions (indirect and direct; items averaged separately)
- Concussion care seeking behavior (indirect and direct; categorized into "reporters" and "non-reporters" separately)
- We calculated four separate univariate regressions for the BRIEF categories to predict:
  - Concussion care seeking intentions
    - Two linear – indirect and direct
  - Concussion care seeking behavior
    - Two logistic – indirect and direct

Table. Survey Item Examples

Survey Section	Sample Item(s)
<i>Brief Health Literacy Screening Tool<sup>5</sup></i>	
	"How often do you have someone help you read hospital materials or documents from a health care provider?"
	"How confident are you filling out medical forms by yourself?"
	"How often have you had problems learning about a medical condition you've had because of difficulty understanding written information?"
	"How often do you have a problem understanding what is told to you about a medical condition you've had?"
<i>Concussion Care Seeking Intentions<sup>2,6</sup></i>	
Indirect	"I would stop playing and report my symptoms if I sustained a hit to the head or body that caused me to <b>see stars</b> ."
Direct	"When I experience possible <b>concussion</b> symptoms...I intend to tell a health care provider, coach or parent/guardian"
<i>Concussion Care Seeking Behavior<sup>2,6</sup></i>	
Indirect	"Please click YES if the following has occurred to you in the past 365 days and NO if it has not occurred to you in the past 365 days... <b>Dizziness after an impact</b> " "Continued to experience any of these symptoms the day after a hit but did not tell a coach or athletic trainer."
Direct	"How many <b>concussions</b> do you think you have experienced within your lifetime?" How many of the possible <b>concussions</b> you experienced did you report to a medical professional (doctor, athletic trainer, etc.) or a coach?

## Results

- We had a completion rate of 96.3% (n=257/267)
  - Females = 159, 59.6%
  - Males = 96, 36.0%
  - Non-binary/Third gender = 1, 0.4%;
  - No response = 11, 4.1%
  - Age=20.7 ± 2.2 years
- Frequencies of BRIEF categorizations are included in Figure.
- Participants with marginal and adequate BRIEF scores had higher indirect intentions compared to inadequate BRIEF scores by 0.40 and 0.51, respectively ( $F_{2,258}=3.72$ ,  $p=0.026$ ,  $R^2=0.028$ ).
- BRIEF scores did not predict:
  - Direct care seeking intentions ( $p=0.058$ )
  - Care seeking behavior (indirect:  $p=0.544$  nor direct:  $p=0.900$ )

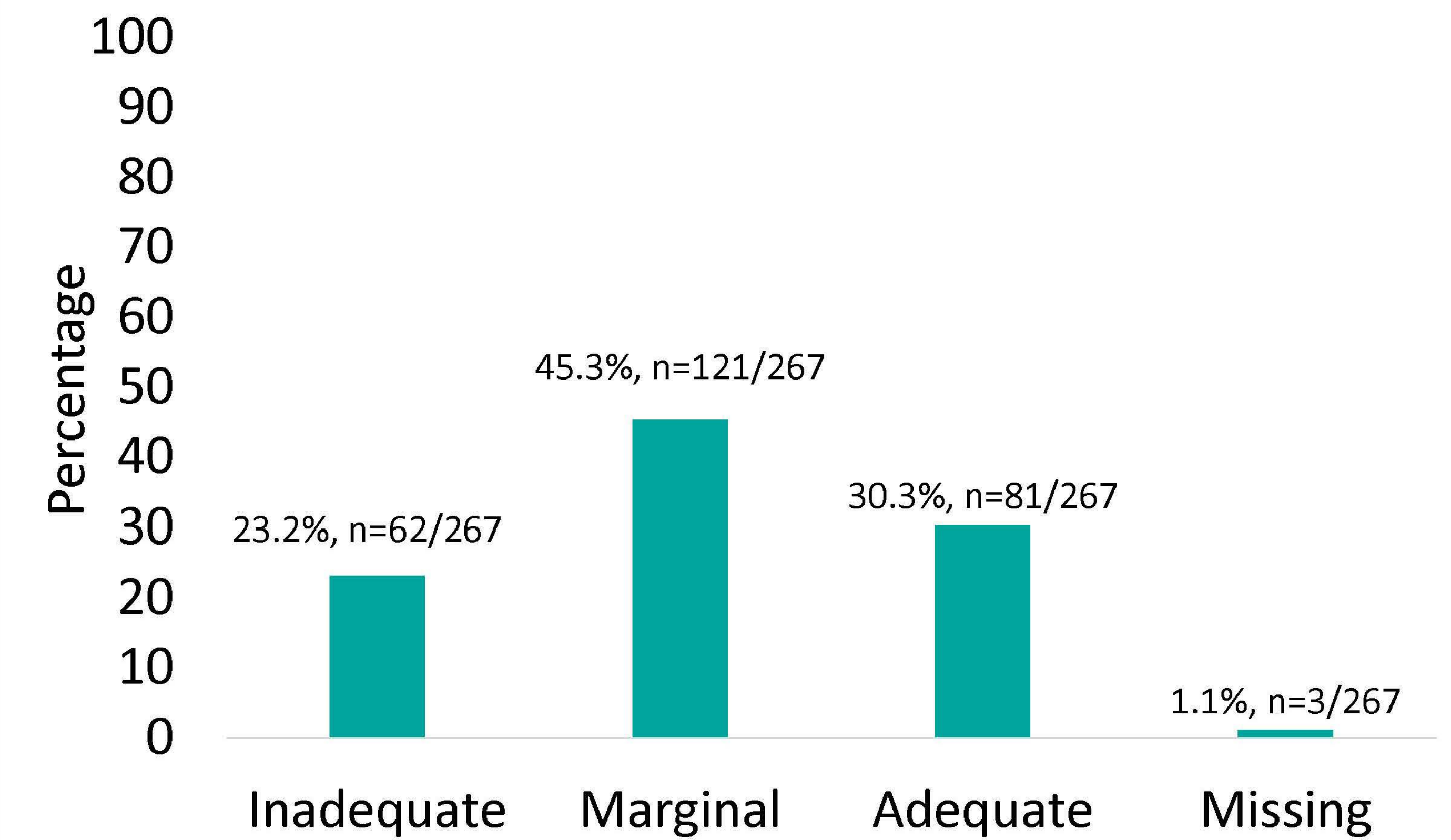


Figure. BRIEF health literacy category descriptive findings

## Implications

- Greater health literacy was associated with greater concussion care seeking intentions; however, this did not correlate with greater care seeking behavior in general college-aged students
- Health literacy may influence concussion care seeking in a small way given the level of variance explained by the data
- Our results also highlight that general college-aged students have marginal health literacy which may be important for broader understanding and implementation of health-related information
- Future research may incorporate health literacy in concussion education, but it may play a more significant role in outcomes after concussion care is pursued

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## Disclosures and Contact

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