



# Baseball Pitching Literature Is More Common And Impactful Than Softball: Identification Of Disparity In Sport Research

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# Disclosures

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- Stryker/Tornier: Paid Consultant/IP
- Arthrex: Paid Consultant/IP
- American Academy of Orthopedic Surgeons: Committee or board member
- American Shoulder and Elbow Surgeon: Committee or board member
- American Orthopedic Society for Sports Medicine: Committee or board member
- ISAKOS: Committee or board member
- Knee Surgery, Sports Traumatology, Arthroscopy: Editorial or governing board
- Annals in Joint: Editorial or governing board
- Arthroscopy: Editorial or governing board
- JISAKOS: Editorial or governing board
- American Journal of Sports Medicine: Reviewer
- Journal of American Academy of Orthopedic Surgeons: Reviewer
- Knee Surgery, Sports Traumatology, Arthroscopy: Reviewer
- Journal of Shoulder and Elbow Surgery: Reviewer
- Journal of Bone and Joint Surgery: Reviewer

## Justin Greiner

- American Journal of Sports Medicine: Reviewer
- Journal of Shoulder and Elbow Surgery: Reviewer
- Journal of Arthroscopy: Reviewer



# Introduction

- Baseball and softball are two of the most popular sports among male and female athletes, respectively
- The repetitive nature of throwing, particularly amongst pitchers, increases the risk of overuse injuries
- Despite similar risk level and injury rates, there are more regulations intended to protect baseball pitchers/players than softball pitchers/players



# Purpose & Hypothesis

- Purpose: Quantitatively and qualitatively compare the literature aimed at studying youth baseball and softball pitching over the last 30 years
- Hypothesis: Baseball literature would be higher in quantity, quality, and overall impact than softball literature

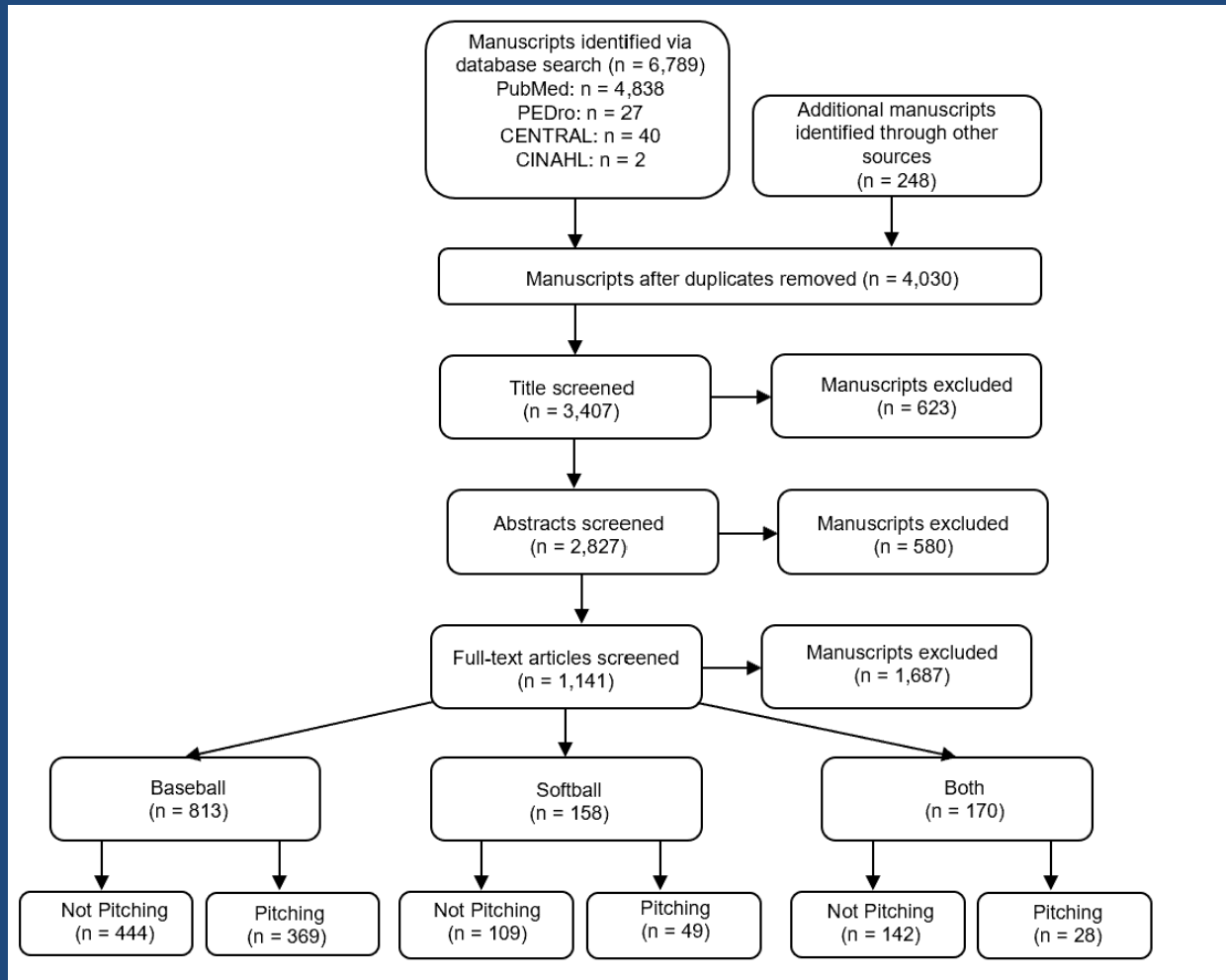


# Methods

- Systematic review of the literature to identify all articles studying only baseball (baseball), only softball (softball), or both baseball and softball (both/combined)
- Original research articles published between 1990-2020 in English in a peer reviewed journal
- Any intervention allowed as long as control group was available
- Excluded if not common variations of sport (e.g., slow pitch, women's baseball)

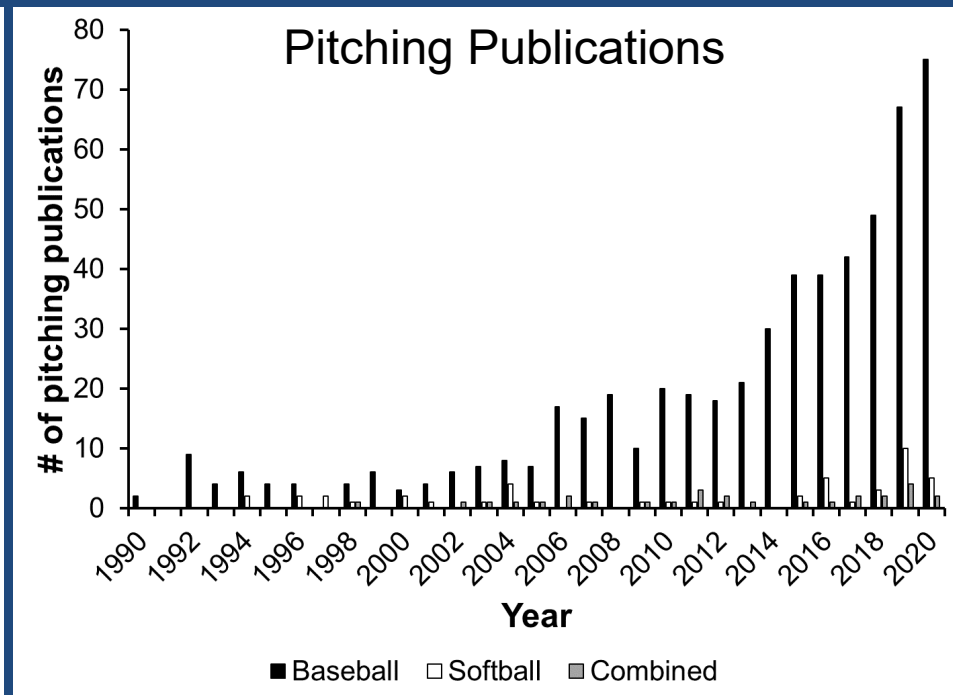
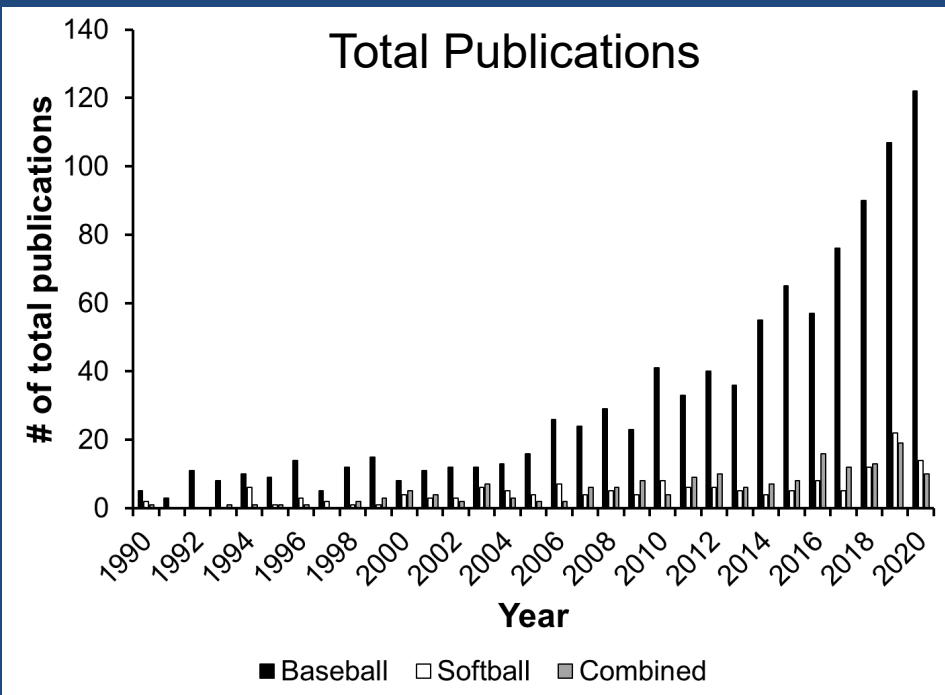


# Results: Flowchart of article screening





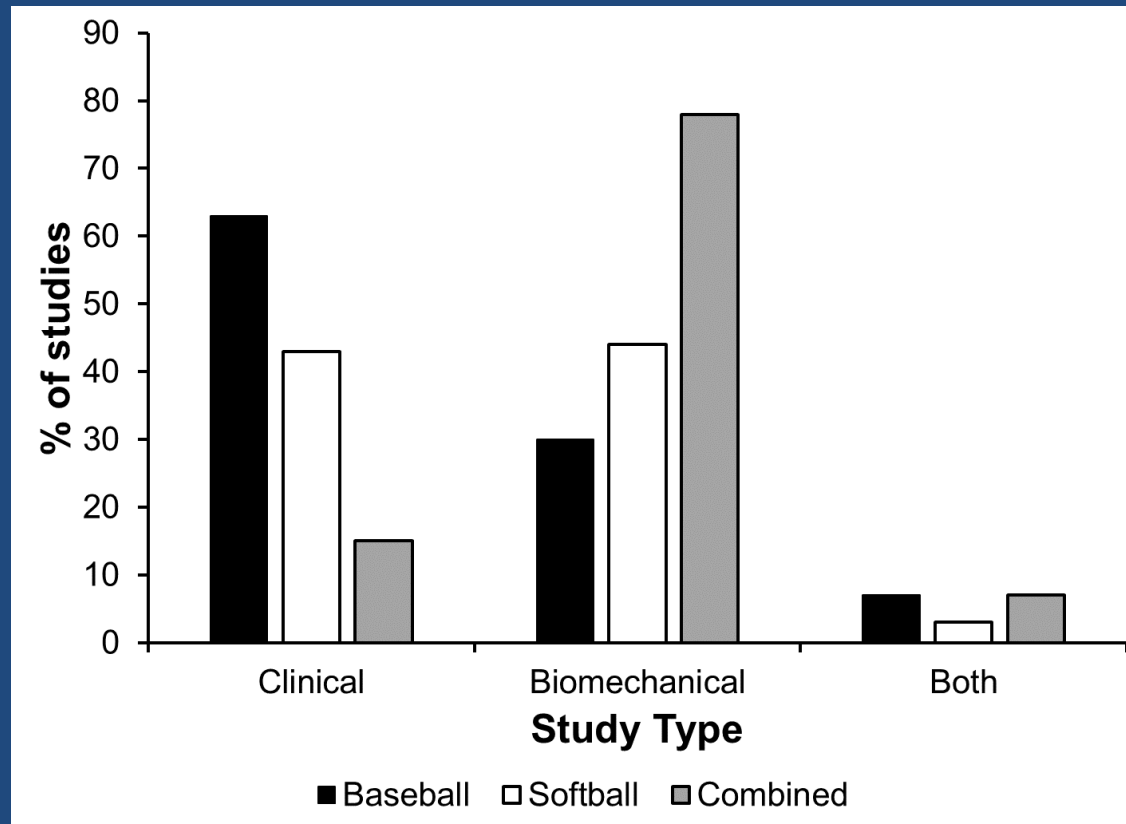
# Results: Publication rates comparison



The rate of total and pitching related publications per year is significantly higher in baseball than in softball and combined ( $p < 0.001$ )



# Results: Study type comparison

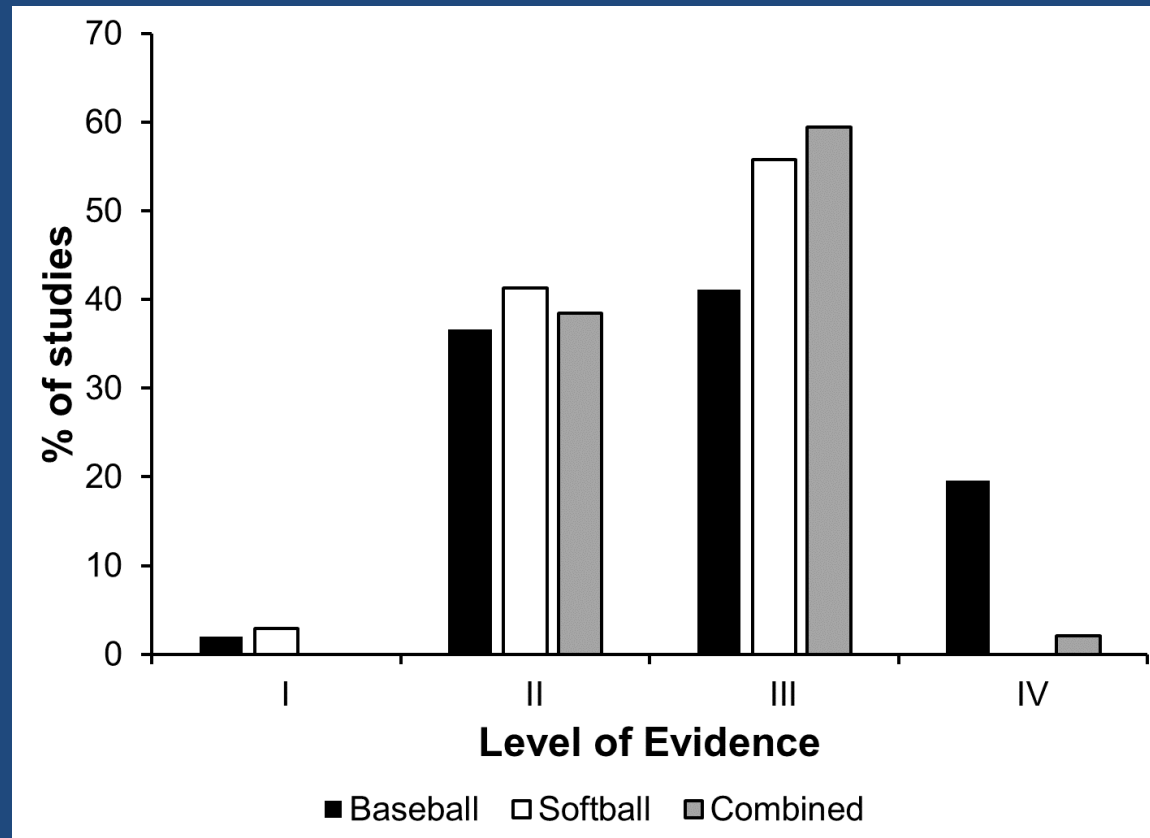


Baseball studies tend to be more clinically oriented, with softball studies split between clinical and biomechanical, and combined studies more biomechanical ( $p = 0.004$ )





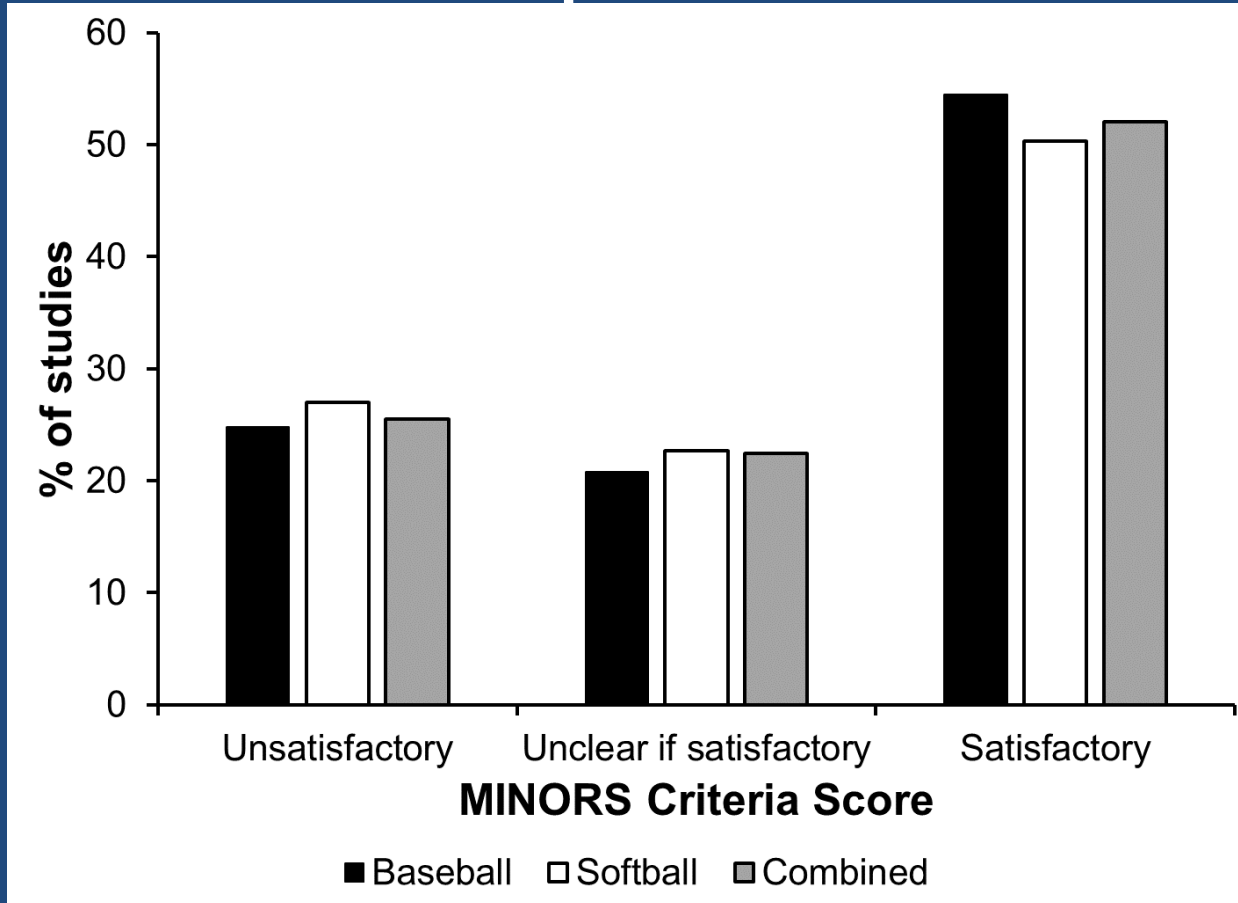
# Results: Level of evidence comparison



Softball and combined studies had more Level II and III articles than baseball  
( $p = 0.008$ )

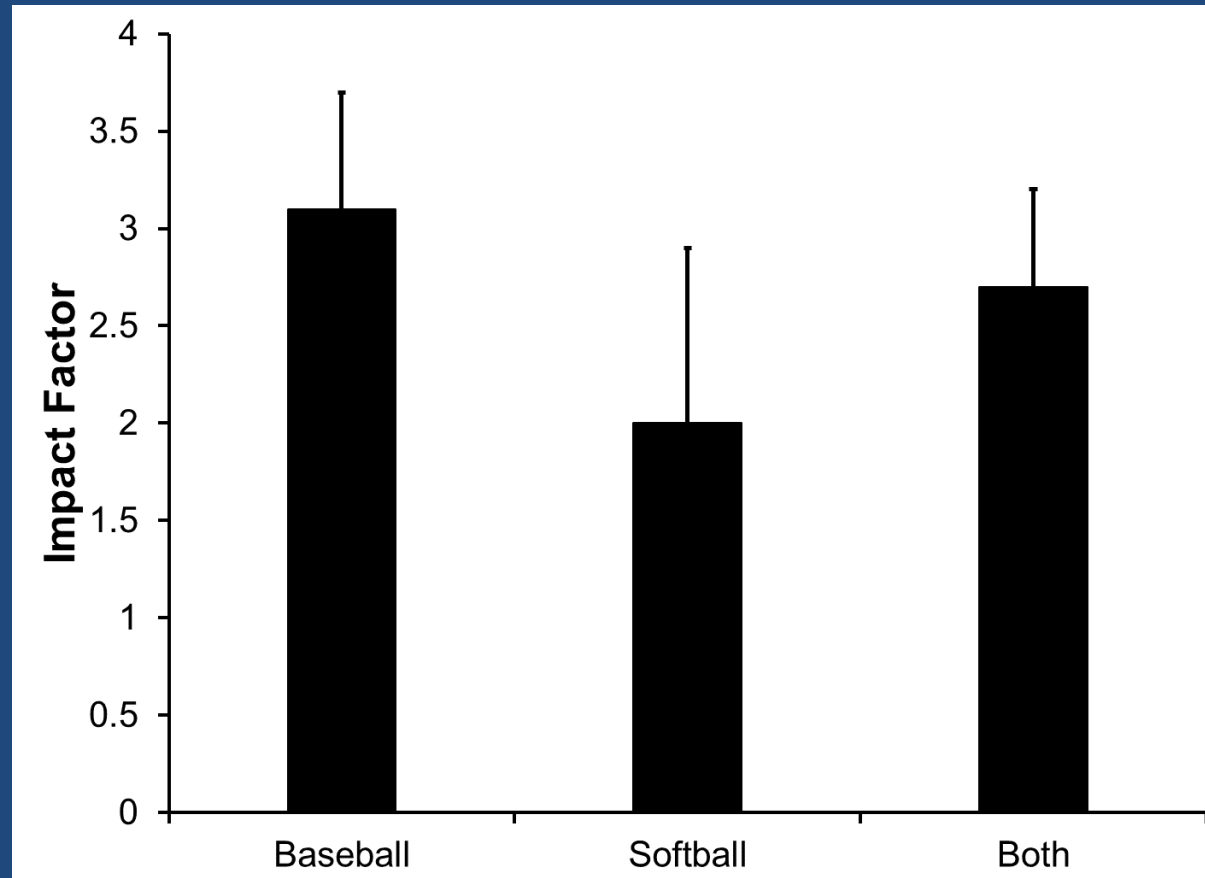


# Results: MINORS criteria comparison



There was no difference in MINORS criteria between groups ( $p = 0.678$ )

# Results: Impact factor comparison



Baseball studies were published in higher impact factor journals than softball and combined studies ( $p = 0.049$ ).



# Discussion

- Baseball articles and the associated publishing rate far outnumber those observed in softball
  - There is a need for more targeted research studies aimed at addressing this disparity
- Baseball and softball articles tend to be of the same study type and rigor, but softball articles are published in lower impact journals
  - There is a need for more representative publishing schemes among journals



# Questions?

- Feel free to reach out
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