

# **Preoperative Resilience Among Patients Undergoing Sports, Trauma, and Reconstructive Surgery**

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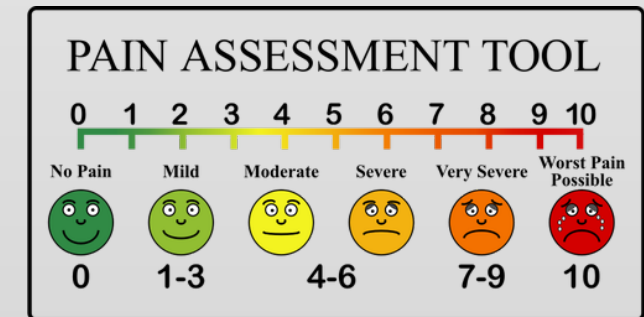
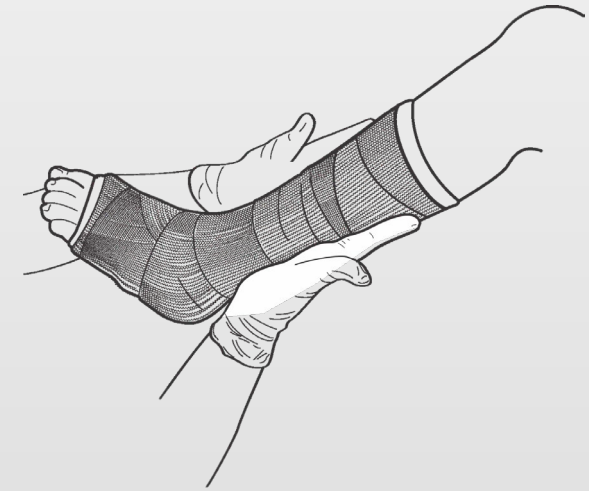
# Disclosures

- No relevant disclosures



# Resilience

- “The ability to bounce back or recover from stress” – Smith 2008
- Factors like resilience and self-efficacy play an important role in perception of musculoskeletal pain
- Role of patient resilience in foot and ankle surgery has not been broadly studied



# Goal

- Determine if pre-operative patient resilience is associated with physical or mental health patient-reported outcomes

**Brief Resilience Scale  
(BRS)**

X



# Methods – Outcomes collected

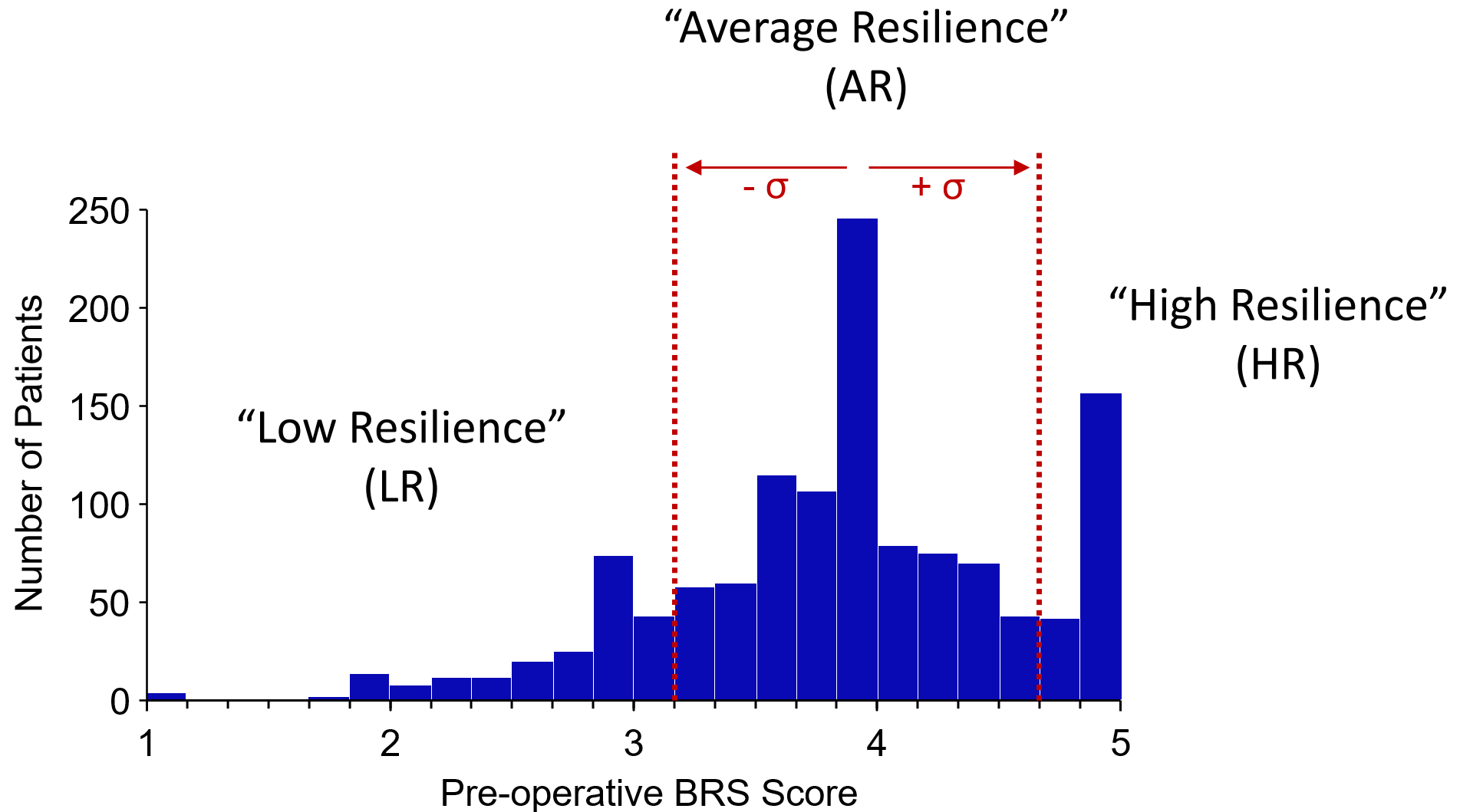
- Consecutive patients enrolled in the U-COSMOS\* platform
- Patients undergoing foot and ankle surgery
- Dates: 2019 - 2023
- PROs Collected:
  - Brief Resilience Scale
  - PROMIS Physical Function CAT
  - PROMIS Pain Interference CAT
  - PROMIS Depression



\***U**niversity of **C**olorado **O**rthopaedic  
**S**urgery **M**onitoring of **O**utcomes **S**ystem



# Methods – Grouping Pre-operative Resilience



# Results

- N = 1389
- All surgeries included
- Minimum 6-month follow-up
- Used longest follow-up available
- Average follow-up 354 days

## Patient Demographics (N=1389)

### Follow-up (days)

Mean (SD) 354 ( $\pm$ 187)

### Age

Mean (SD) 51.5 ( $\pm$ 16.0)

### Gender

Female 824 (59.3%)

Male 565 (40.7%)

### Race

White 1187 (85.5%)

Black or African American 29 (2.1%)

Asian 26 (1.9%)

American Indian or Alaska Native 5 (0.4%)

Other Race 66 (4.8%)

Missing 76 (5.5%)

### Laterality

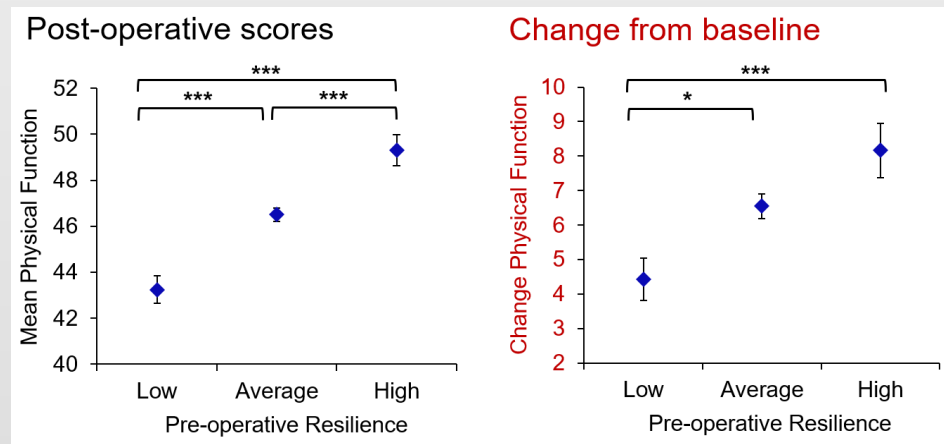
Left 697 (50.2%)

Right 669 (48.2%)

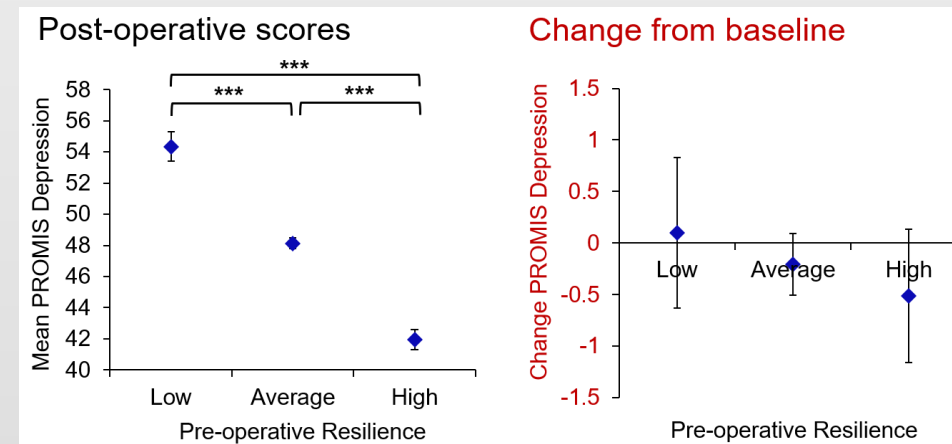
Missing 23 (1.7%)

# Results – Patient-reported outcomes

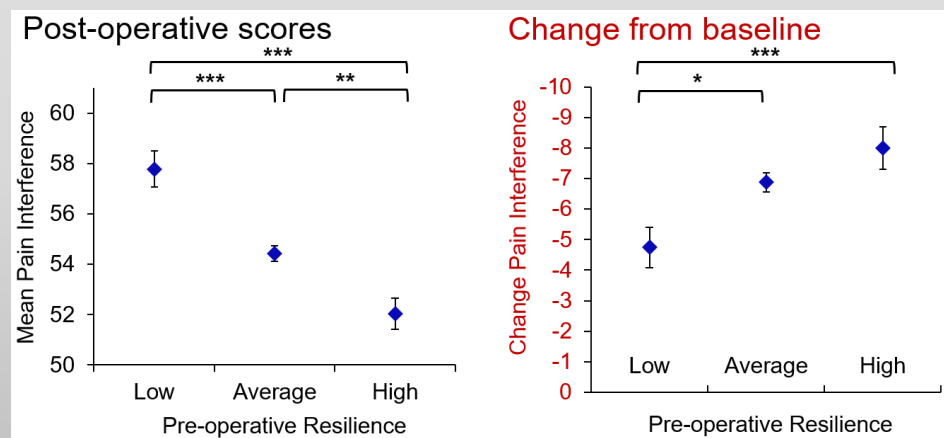
## PROMIS Physical Function



## PROMIS Depression



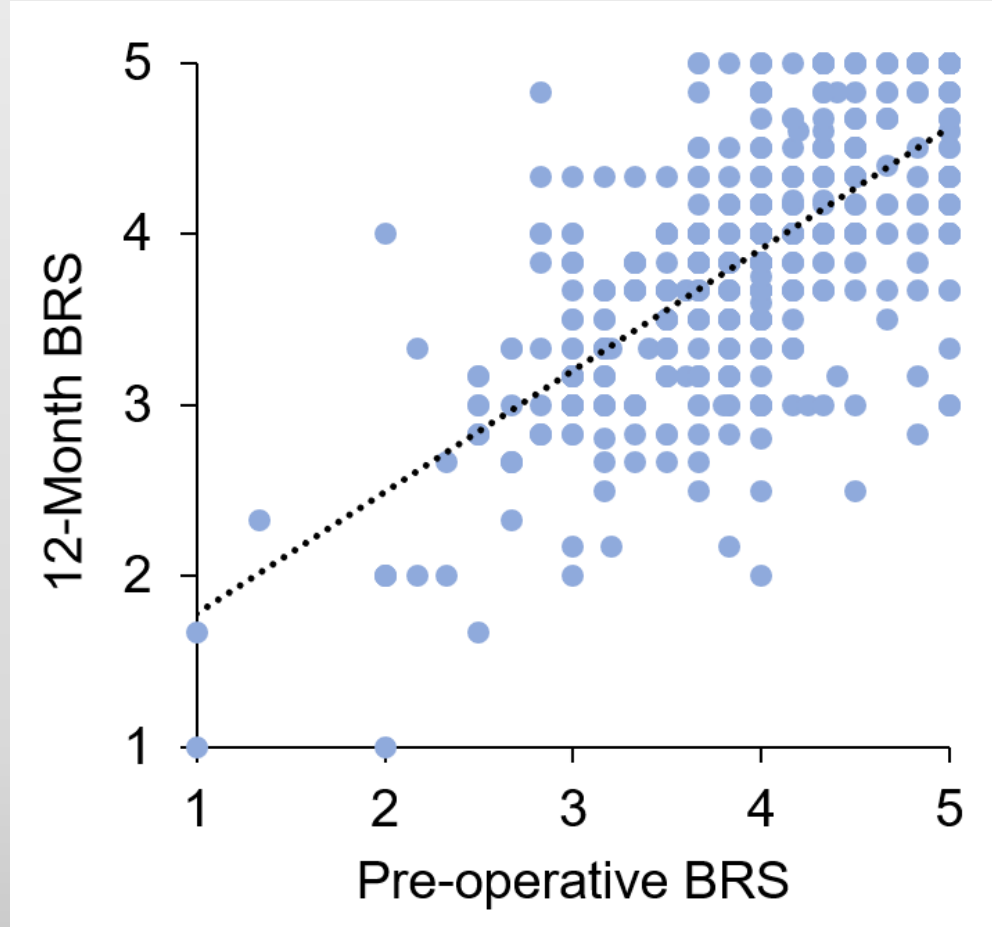
## PROMIS Pain Interference



While change is seen from preoperative baseline for physical health scores, change from baseline is not seen for mental health scores

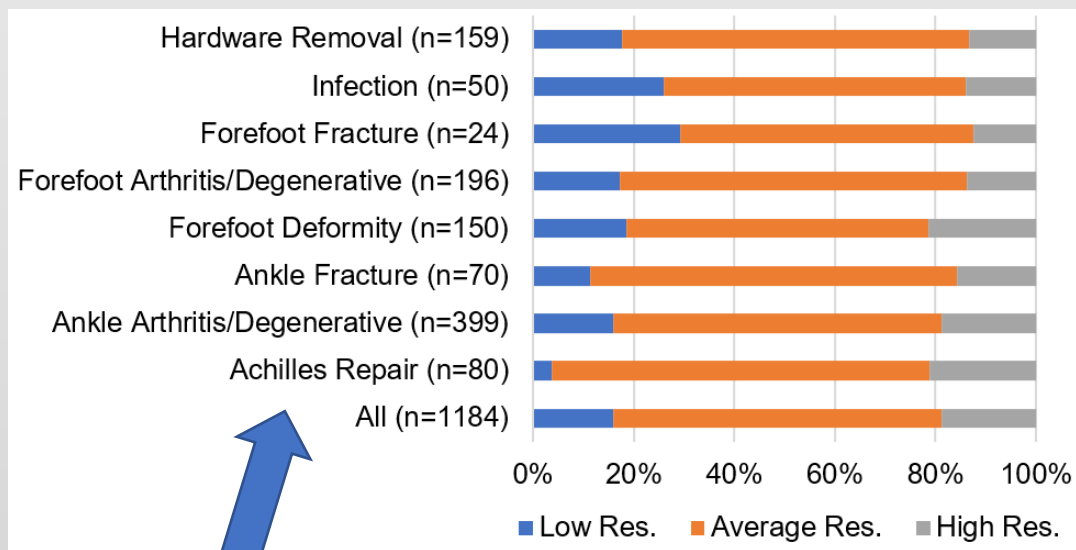


# Resilience consistent over time

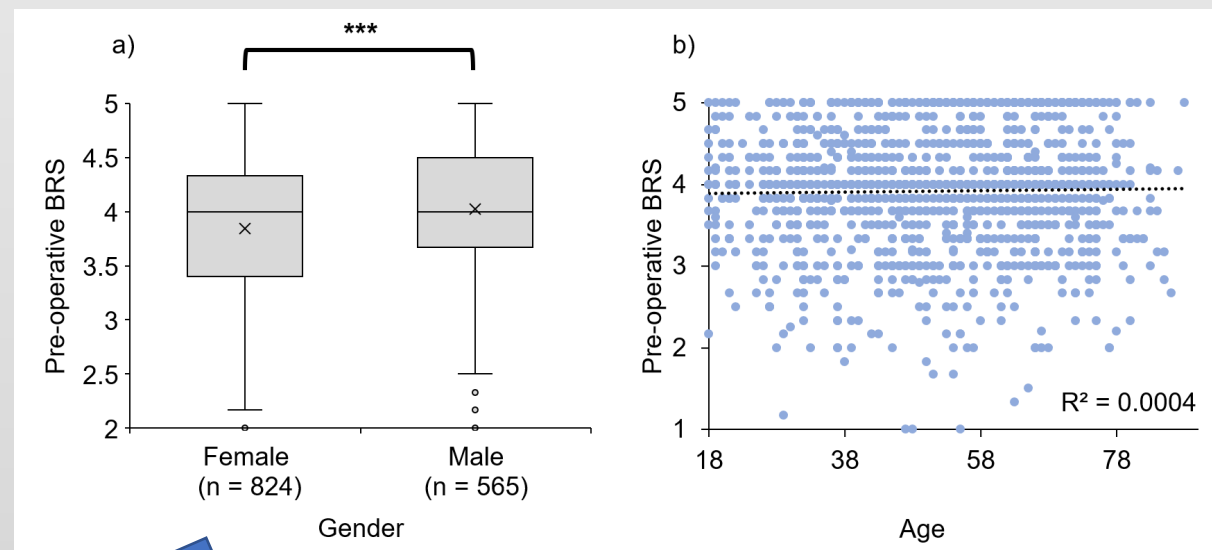


- Test-Retest Reliability
- $n = 527$
- $r = 0.69$
- $p < 0.001$

# Average reported resilience is similar among different patient populations



Only 4% of Achilles rupture patients report low resilience (16% of total patients report low resilience)



Minor (though statistically significant) difference between males and females

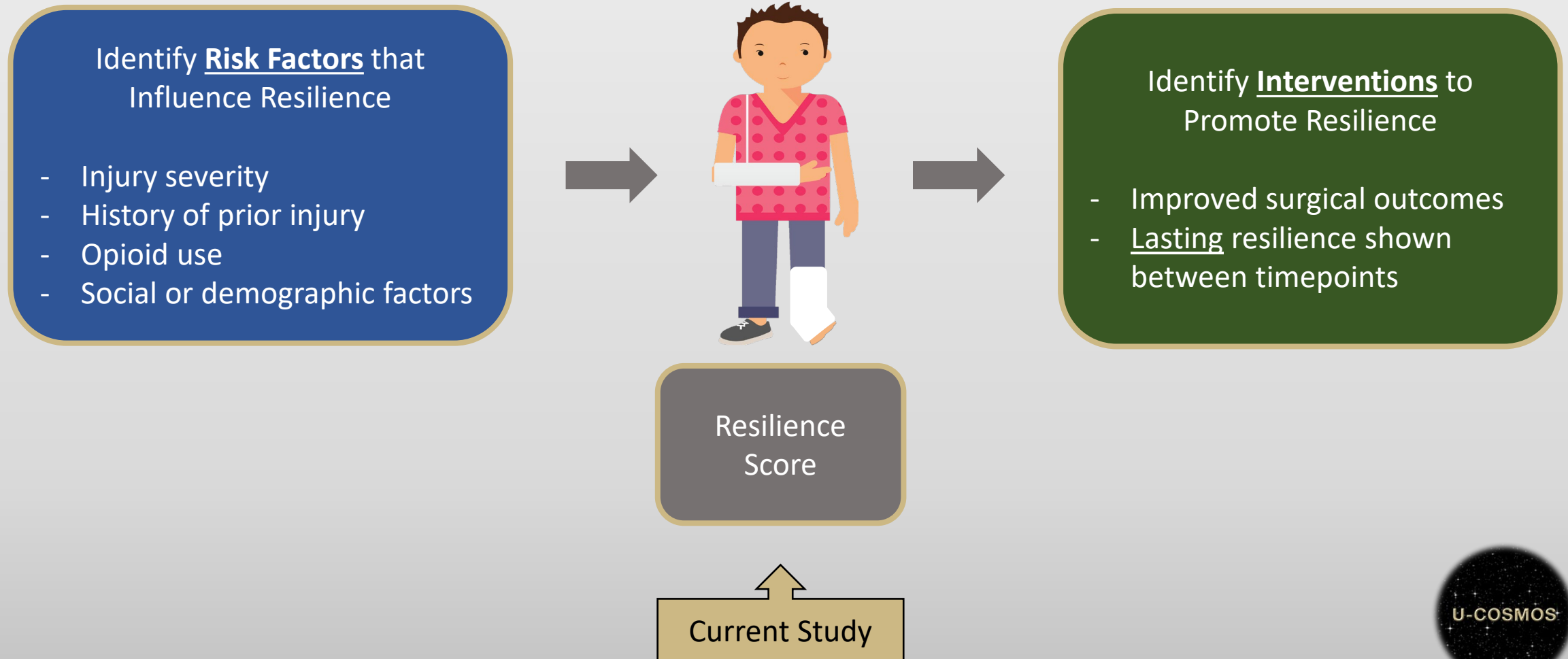


# Summary

- High resilience patients report higher post-op scores in all PROs compared to average and low resilience patients ( $p < 0.001$ )
- **High resilience patients report greater improvement of scores for physical health PROs compared to average and low resilience patients ( $p < 0.001$ )**
- Resilience consistent following surgery



# Future Directions



# References

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# Images

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