

DAILY PROTEIN INTAKE AND INJURY PREVALENCE



By: Emily McDaniel, Ava McInnes, and Maggie Bria

OBJECTIVE

To examine whether a **higher consumption of daily protein intake is associated with a decrease in the rate of injury** among student-athletes at UC San Diego.

BACKGROUND

- Elite athletes face a high risk of musculoskeletal injuries, with a **96.1% injury rate** over one year.
- Adequate protein intake (**1.2-2.0 g/kg**) is vital for **muscle repair, recovery, and overall performance** in athletes.
- Most research has been conducted on **professional athletes**, while our study focuses on **college level athletes**.



METHODS

Questions included:

- **Demographics:** gender, year in school, weight, sport, and time spent training
- **Exposure:** Various protein sources and sizes to determine weekly protein intake
- **Outcome:** Number of injuries in the past year

Study Design:

- **Spearman correlation** test using Excel
- An **anonymous 10-item online Google Forms** survey was distributed to college athletes at UCSD

RESULTS

Out of the **30 participants**, 90% identified as female and 10% male. For the age distribution, 83.33% fell between 19-22 years old. The average time spent training weekly is 19.07 hours.

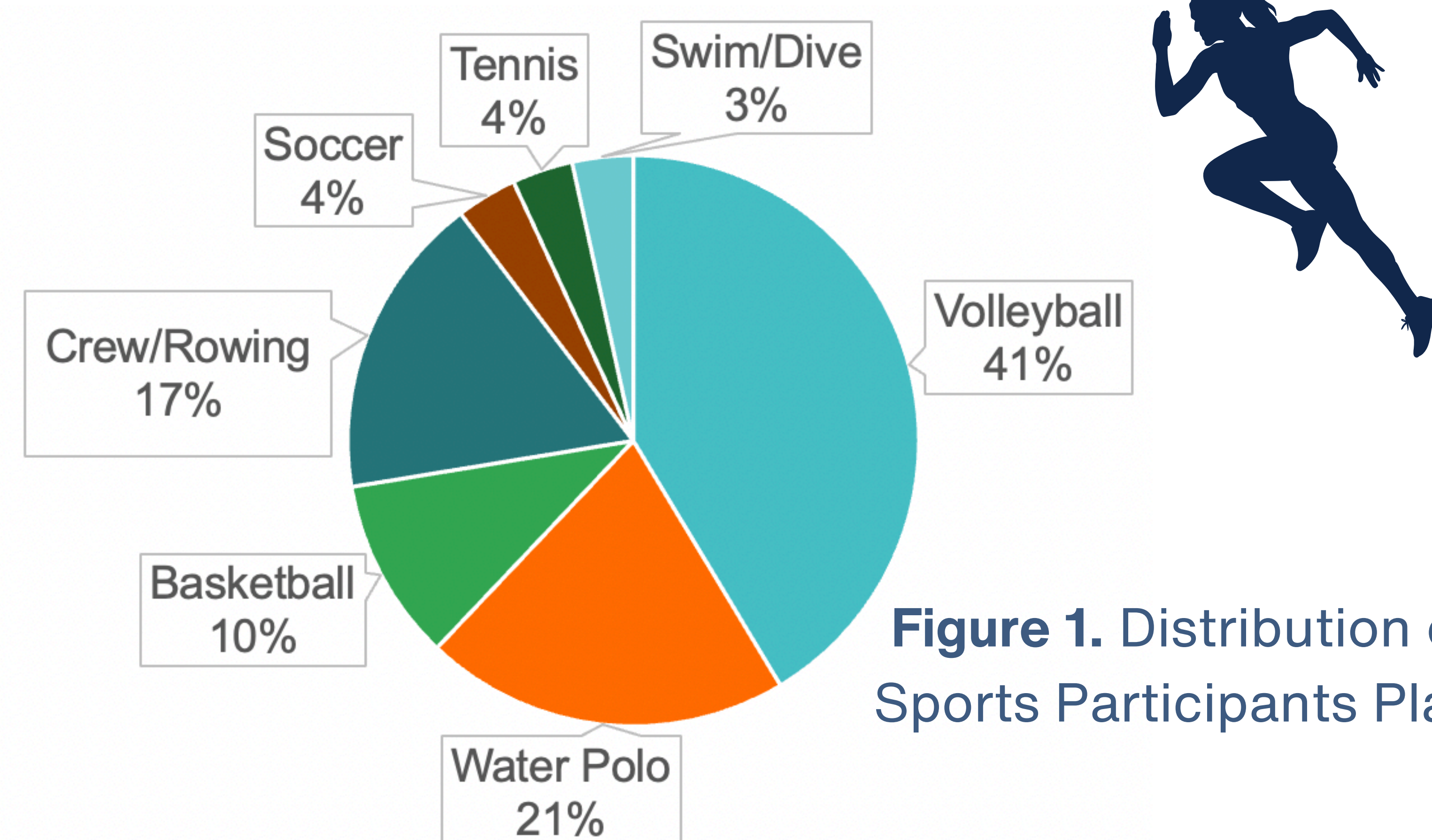
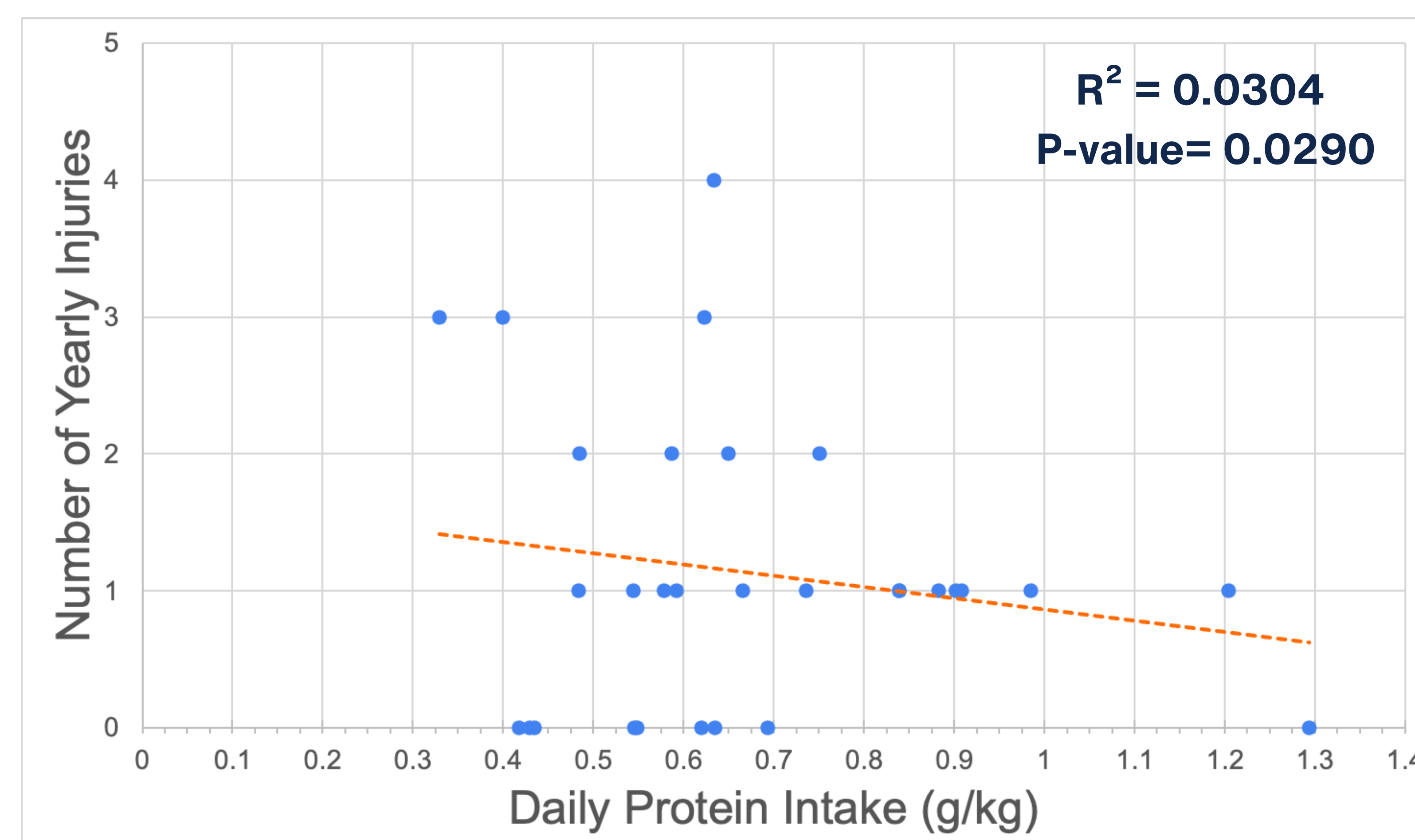


Figure 1. Distribution of Sports Participants Play

Figure 2. Correlation Between Daily Protein Intake (g/kg) and Yearly Injuries Among Current UCSD Athletes



There is a statistically significant but weak negative relationship between daily protein intake and the number of yearly injuries

CONCLUSION

- A **statistically significant, but weak negative relationship** between weekly protein intake and injury prevalence in UCSD student athletes.
- This study did not take into account confounding variables that affect injury prevalence, such as sleep, training intensity, and previous injuries.

POLICY IMPLICATION

- Further research should **include a more diverse population and larger sample size**.
- We suggest an **implementation of nutrition classes**, mandatory for student-athletes to understand the importance of nutrition on their overall health.
- A **reduction in healthcare spending is expected** with a decrease in student-athlete injuries.



ACKNOWLEDGMENTS

Thank you to all who participated in our study. We also acknowledge the UCSD School of Public Health, Dr. Marquez, and Cassidy Le for any guidance and assistance they provided.