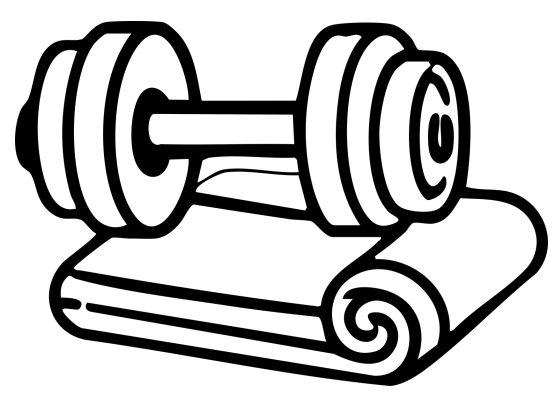
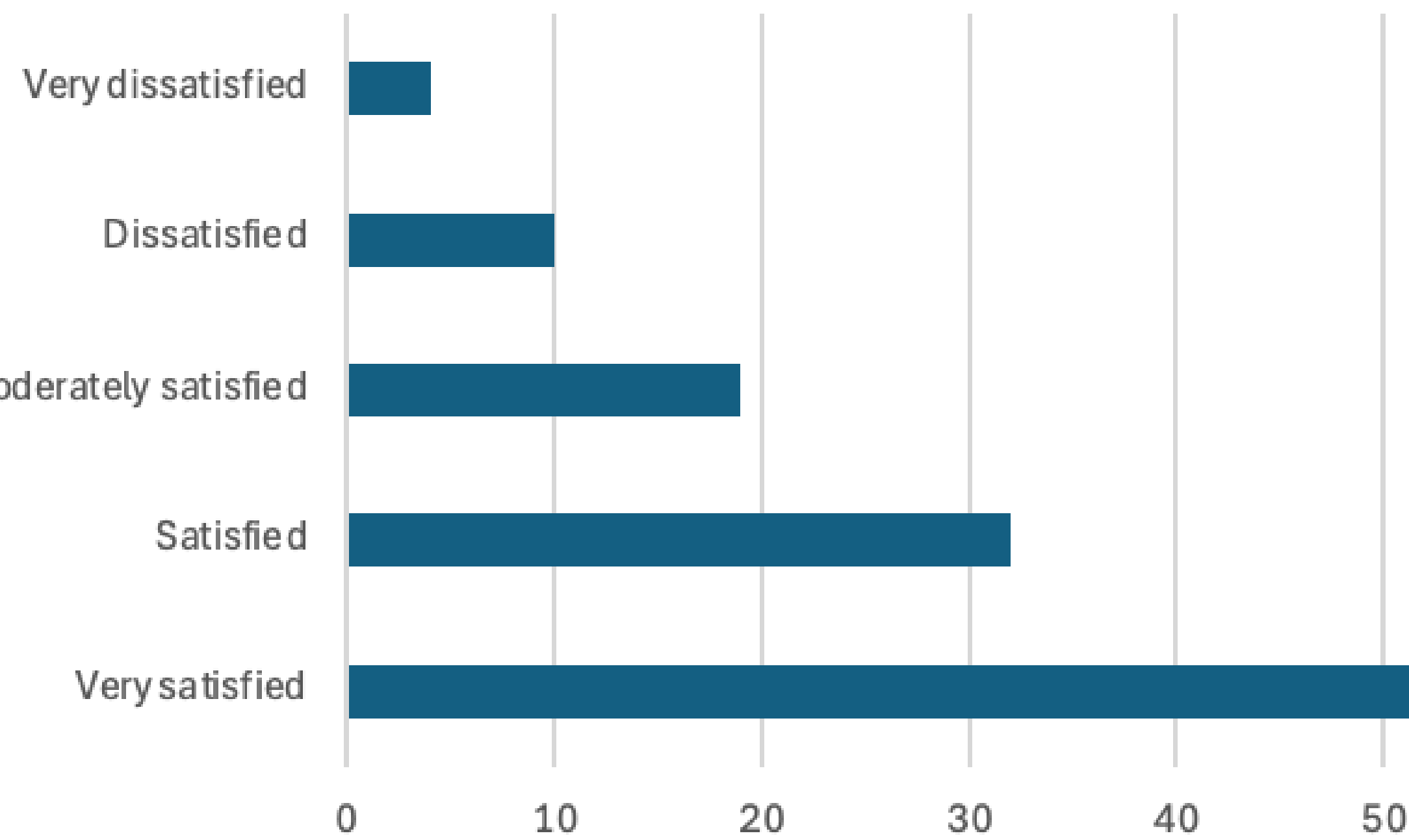




Introductions

- Sleep is essential for physical recovery, brain function, and overall health.
- Athletes often experience sleep deprivation due to training, travel, academics, and stress.
- Lack of sleep negatively impacts.
 - Endurance
 - Reaction time
 - Decision making
 - Recovery
- The study examines how sleep duration and quality affect athletic performance.

Satisfaction with performance



Methods

- Sources include Google Scholar & PubMed
- Included studies examining physiological, cognitive, and performance outcomes.
- Key words: Sleep Deprivation, Sleep Quality, Endurance Performance, Circadian Rhythm, Athletic Performance, Cognitive Performance, REM, Sleep Restriction, Sleep Quality, and Sleep Loss Exercise Physiology



Research synthesis



Physiological Effects

- Sleep supports muscle repair, glycogen restoration, and hormone regulation
- Sleep Deprivation increases cortisol and decreases growth hormones
- impaired recovery leads to increased fatigue and reduced performance

Cognitive Effects

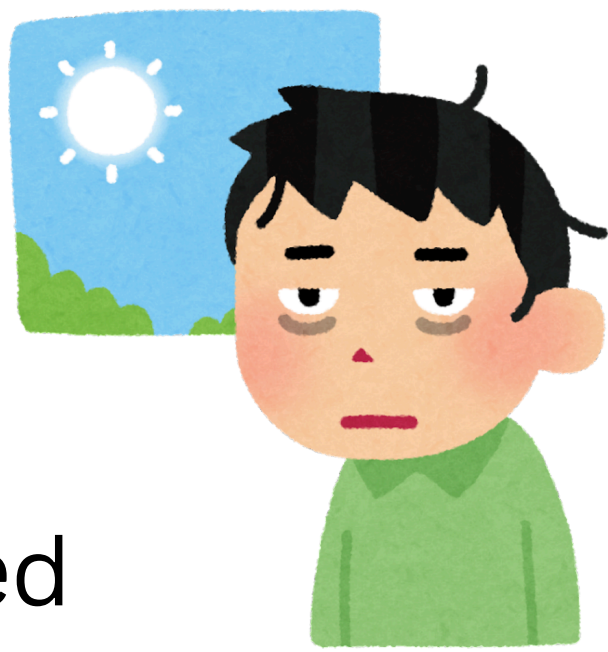
- Sleep loss reduces attention, reaction time, and decision-making abilities
- Increased mental fatigue and overthinking affecting performance strategies
- Lower motivation and focus during training and competition

Endurance Performance

- Sleep-deprived athletes show reduced endurance capacity
- higher ratings of perceived exertion (RPE) during exercise
- Athletes may underperform due to increased fatigue and altered pacing

Practical Implications

- Better sleep quality is linked to improved performance and satisfaction
- Poor sleep is associated with lower race outcomes and increased exhaustion
- Collegiate and endurance athletes commonly experience sleep restrictions



Conclusion

- Sleep plays a critical role in athletic performance
- Sleep duration leads to:
 - Decreased endurance
 - Slower reaction time
 - Increased fatigue
 - Lapse in decision-making
 - Slower recovery
- Less sleep is associated with lower performance and satisfaction
- Improving sleep habits is a simple and effective way to enhance performance and overall health
- Both sleep duration and quality are key factors

Future Research

- Examine the long-term effects of chronic sleep deprivation on athletic performance and recovery
- Investigate differences in sleep needs across athlete types
- Explore interventions to improve sleep quality, such as sleep hygiene programs, napping, and recovery strategies
- Study the relationship between sleep and injury risk in athletes
- Analyze how travel, stress, and competition schedules disrupt sleep patterns
- Examine the role of circadian rhythms in athletic performance and optimal training times

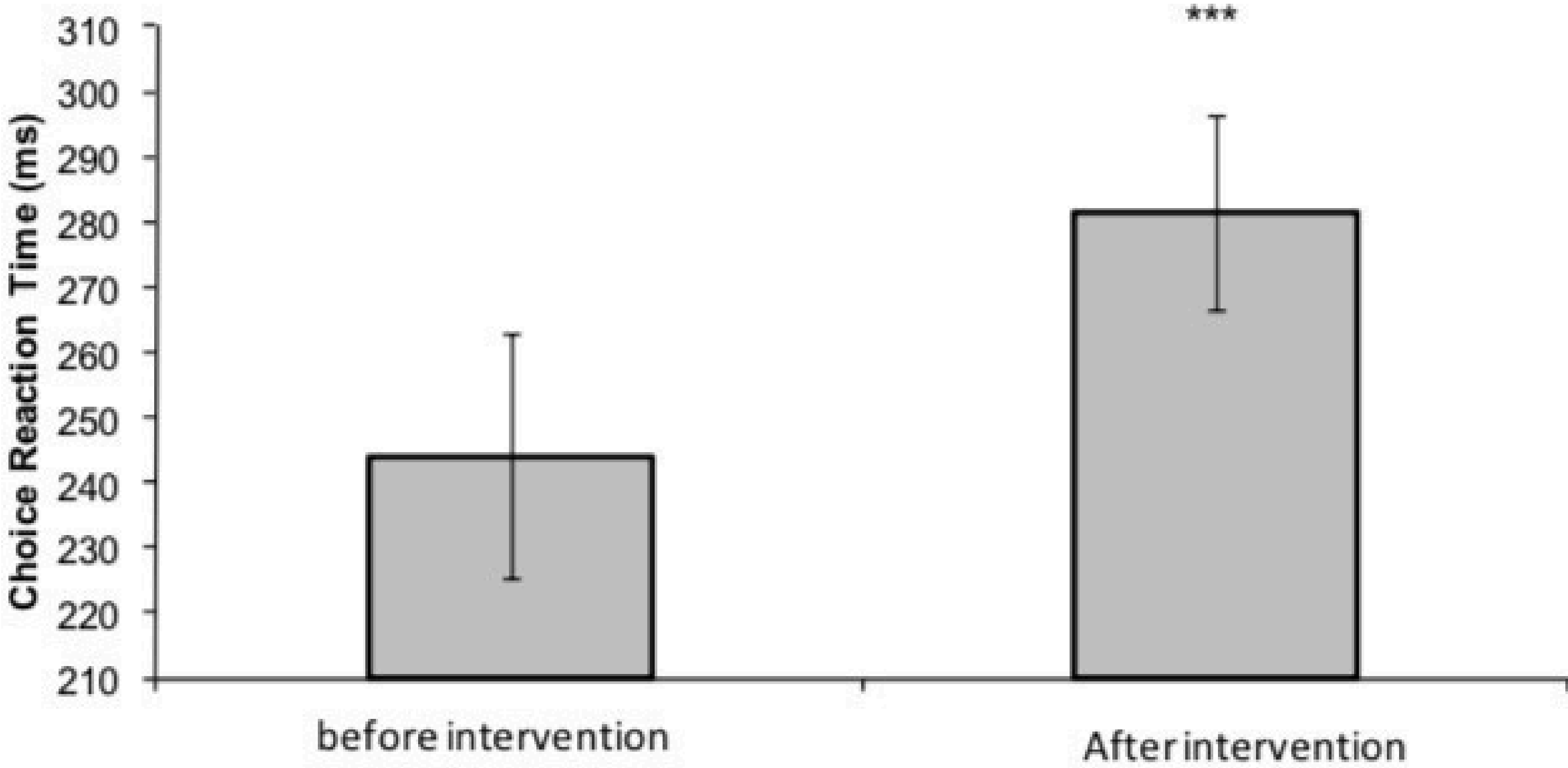


Fig. 3: Mean choice reaction time of subjects before and after intervention (***)

Taheri and Arabameri (2012)

Citations

