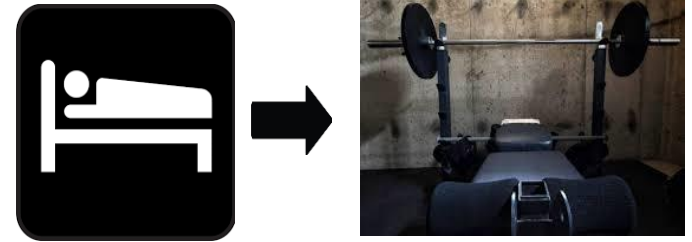


Introduction:

Del Val-Malzano et al., (2026) found that Partial and total sleep deprivation reduced Bar velocity in a 50% 1RM. They suggest Strength is preserved however Power and Velocity is most affects. This research will specifically focus on The effects of partial sleep deprivation on a mixed sample of 18 years olds, using a repeated measures design.



Methodology:

Participants were asked to record their sleep patterns for a week to be eligible to part in the study. Athletes were randomly selected and were unknown to them split into two research groups for each day of testing. Group 1 = <7 hours sleep, Group 2 > 7 Hours sleep.

- Research was completed over 2 days exploring their Correlative effective.
- Measuring velocity of an athlete 70% bench press utilising GymAware Linear Positional Transducer.
- Sample: n=5; Male=3, Female=2, All age 18.
- Repeated measures design.
- Measured sleep using electronic watches/trackers.
- Plotted sleep patterns relationship with velocity.

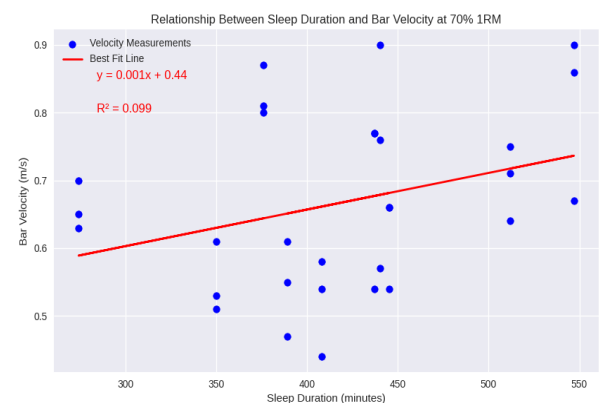
Analysis

My research has found a weak correlation suggesting that a decrease in the amount of sleep reduces the velocity of a 70% 1RM bench press & Performance of an athlete.

This supports the notion of other research such as Taylor & Francis(2024) who found a positive correlation between the effects of sleep and athletic performance.

Results – Data:

| Athlete s | Amount of sleep they had: | Peak Velocity of their 70% test 1 | Velocity of their 70% test 2 | Velocity of their 70% test 3 | 70% weight |
|-----------|---------------------------|-----------------------------------|------------------------------|------------------------------|------------|
| Athlete 1 | 6 hours 16 minutes | 0.57m/s | 0.76m/s | 0.90m/s | 17kg |
| Athlete 2 | 5 hours 50 minutes | 0.54m/s | 0.44m/s | 0.58m/s | 63kg |
| Athlete 3 | 4 hours 34 minutes | 0.61m/s | 0.55m/s | 0.47m/s | 60kg |
| Athlete 4 | 7 hours 17 minutes | 0.86m/s | 0.90m/s | 0.67m/s | 35kg |
| Athlete 5 | 7 hours 25 minutes | 0.75m/s | 0.71m/s | 0.64m/s | 46kg |



Conclusion:

In conclusion it is evident that sleep is an important factor within recovery and preparation across wider sporting performance, and although correlational research cannot provide causation and effect, the fact the similar results have been found provides substantial evidence to support the notion that sleep benefits powerlifting exercises.

This study acts as initial research to facilitate wider research using greater numbers of participants to then increase the validity and reliability of the results. The research was accurate in regards to velocity due to the technology, however limitations are that the researcher relied on the participants to report their sleep time using mainstream wearables.

