

# You Snooze, You Lose: The Association Between College Majors and Sleep Quality

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## Background

- Sleep quality among university students is an increasingly prevalent issue.<sup>1</sup>
- The Center for Disease Control and Prevention (CDC) recommends that adults between the ages of 18 - 60 years of age obtain 7+ hours of sleep/night.<sup>2</sup>
- Sleep deprivation and irregular sleep among university students can result in:
  - Negatively affected academic performance.<sup>3</sup>
  - Reduced daytime alertness.<sup>3</sup>
  - Reduced memory and cognitive function.<sup>3</sup>
- Several studies have reported high prevalence rates of insufficient sleep or irregular sleep schedules among college students due to the assumption that STEM students have more difficult subjects than non-STEM students.<sup>1,3</sup>

## Objectives

- To examine perceived sleep quality amongst university students in the state of California with majors heavily related to science, technology, engineering, and mathematics (STEM) and students whose majors do not.
- To determine whether self-identifying measures demonstrate an association with sleep quality for STEM vs Non-STEM majors.

## Methods

- Utilized **Google Forms** to generate a questionnaire for undergraduate Californian students from April-May 2024.
- Survey distributed through multiple various social media sites.
- **Exposure:** undergraduate students in California whose majors are heavily related to science, technology, engineering, and mathematics (STEM) and those whose majors were not heavily related (non-STEM).
- **Outcome:** sleep quality measured by self-reported data from participants and the **Pittsburg Sleep Quality Index (PSQI)**.
- PSQI scoring range of 0-15 with lower scores indicating better sleep quality.
- **Data Analysis:** Test was conducted through an **unpaired sample T-Test**.

## Results

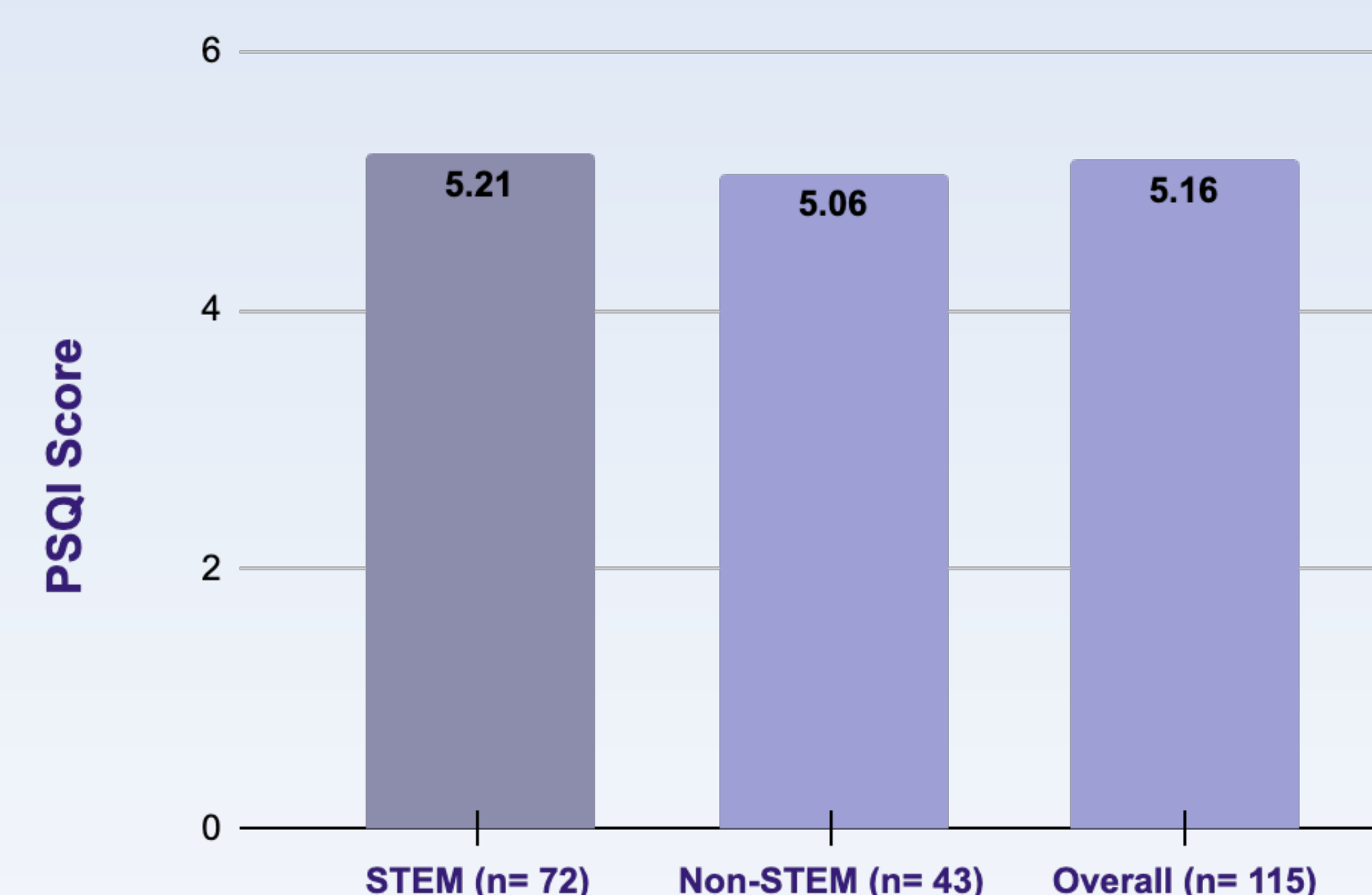
**Table 1: Participant Demographics (n=115)**

	Participants (%)
<b>Gender Identity</b>	
Male	33%
Female	64%
Nonbinary	2%
Prefer not to answer	1%
<b>Age</b>	
(18 – 19)	13%
(20 – 21)	59%
(22 – 23)	24%
(24 – 25)	2%
(>25)	2%
<b>Grade</b>	
Freshman	8%
Sophomore	11%
Junior	37%
Senior	40%
Fifth Year +	3%

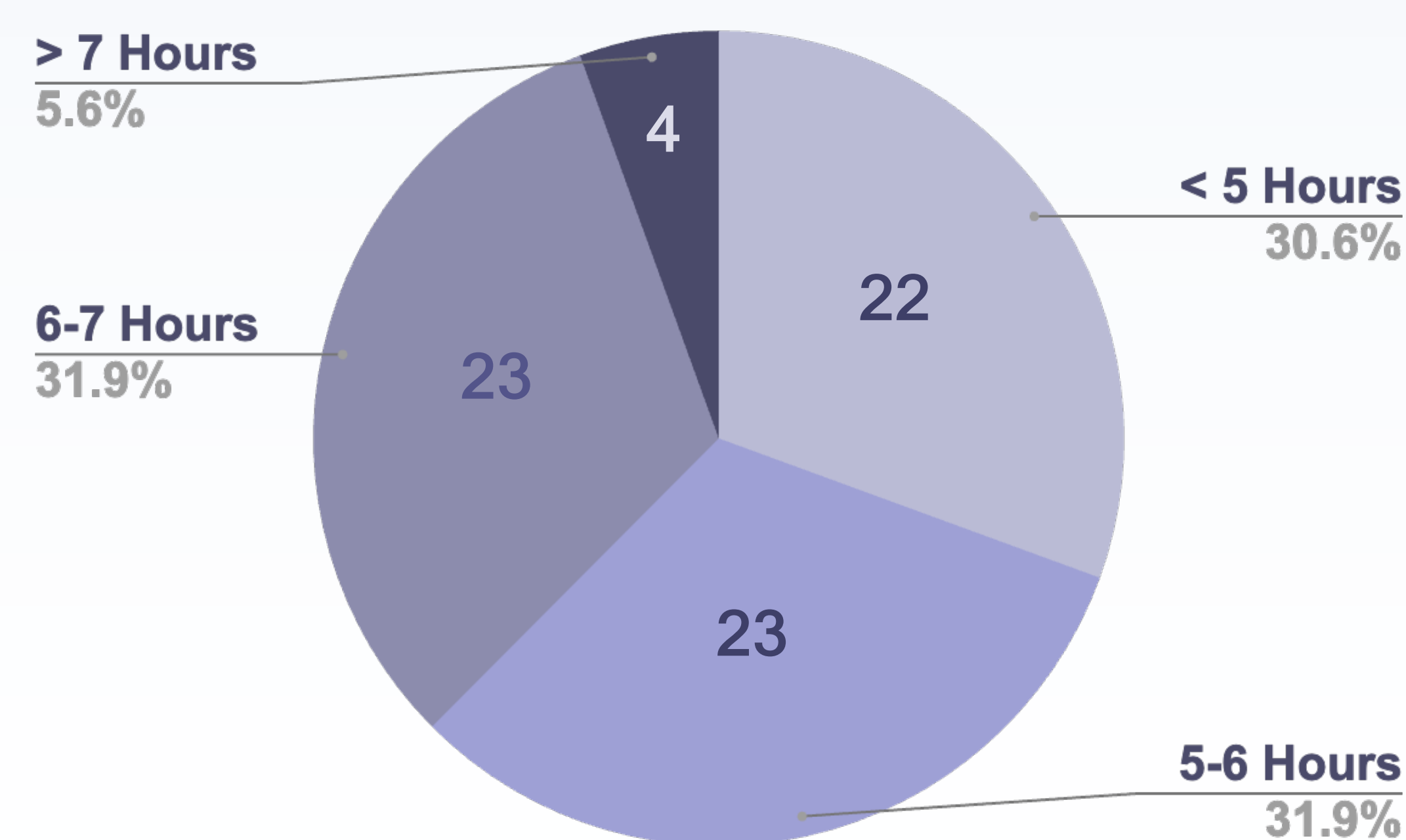
**63%** of participants were **STEM major**

**37%** of participants were **Non-STEM major**

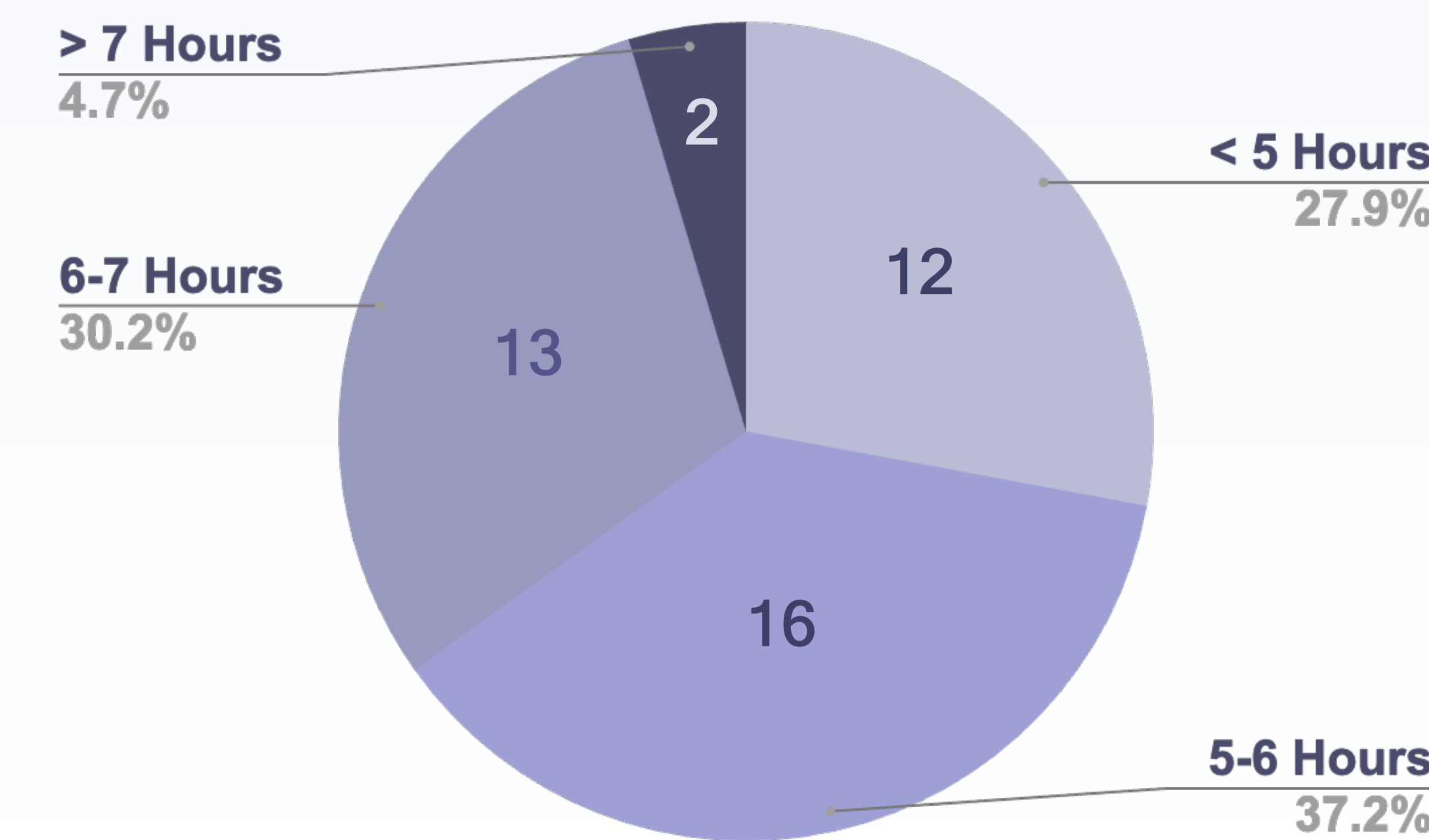
**Figure 1: Average Pittsburgh Sleep Quality (PSQI) Score Amongst Participants \*\*\* p > 0.05**



**Figure 2: Self-Reported Quantity of Sleep of STEM Student Participants (n=72)**



**Figure 3: Self-Reported Quantity of Sleep of non-STEM Student Participants (n= 43)**



## Conclusion

- From an unpaired sample t-test, the two-tailed **P-value** was **0.7949**.
- Majors heavily related to STEM and non-STEM do not have an association with sleep quality.
- Age, gender, and grade level are not associated with participants having majors heavily in STEM or sleep quality.

## Policy Implications

- Universities should explore implementing sleep health initiatives to meet the individual needs of different student groups based on their fields of study.
- Expanding mental health services to provide help that focuses on issues such as stress management, which has a direct impact on sleep quality, could be useful.
- Engage faculty members in discussions about the importance of sleep for students' academic performance.

## Acknowledgements

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## References

