



Sleep and Screen time among adolescents during COVID-19

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INTRODUCTION

Many researchers believe that there is a link between sleep and screen time while other researchers believe that there is no link (Przybylski, 2019).

While there is research done in Italy and Canada, there is little research specifically for teenagers in the United States on their sleep and screen time during the COVID-19 pandemic (Pietrobelli, 2020) (Guerrero, 2020).

Teens getting enough sleep, seven to nine hours a night, is important to their physical and mental health (Rodehen, 1999).

The purpose of this study was to understand how both sleeping habits and smartphone use changed among adolescents between January 2020 to July 2020.

METHODS

Setting and Recruitment:

- Online Survey using Google Forms
- Convenience and Snowball Sampling
- Survey was distributed using researcher's Snapchat and Instagram stories
- Participants had to in high school during COVID-19

Measures:

The same measures regarding sleep and screen time were asked for three time points: January/February, April/May, and June/July

1. **Sleep** was defined as participant's estimate of their total sleep, the time at which they fell asleep, and the time at which they woke up
2. **Phone use** was defined as participants' estimates of screen time (hours + minutes) and their top three most frequently used **smartphone apps**.
3. **Demographic questions** included year in high school, gender, geographic location, and racial/ethnic identity

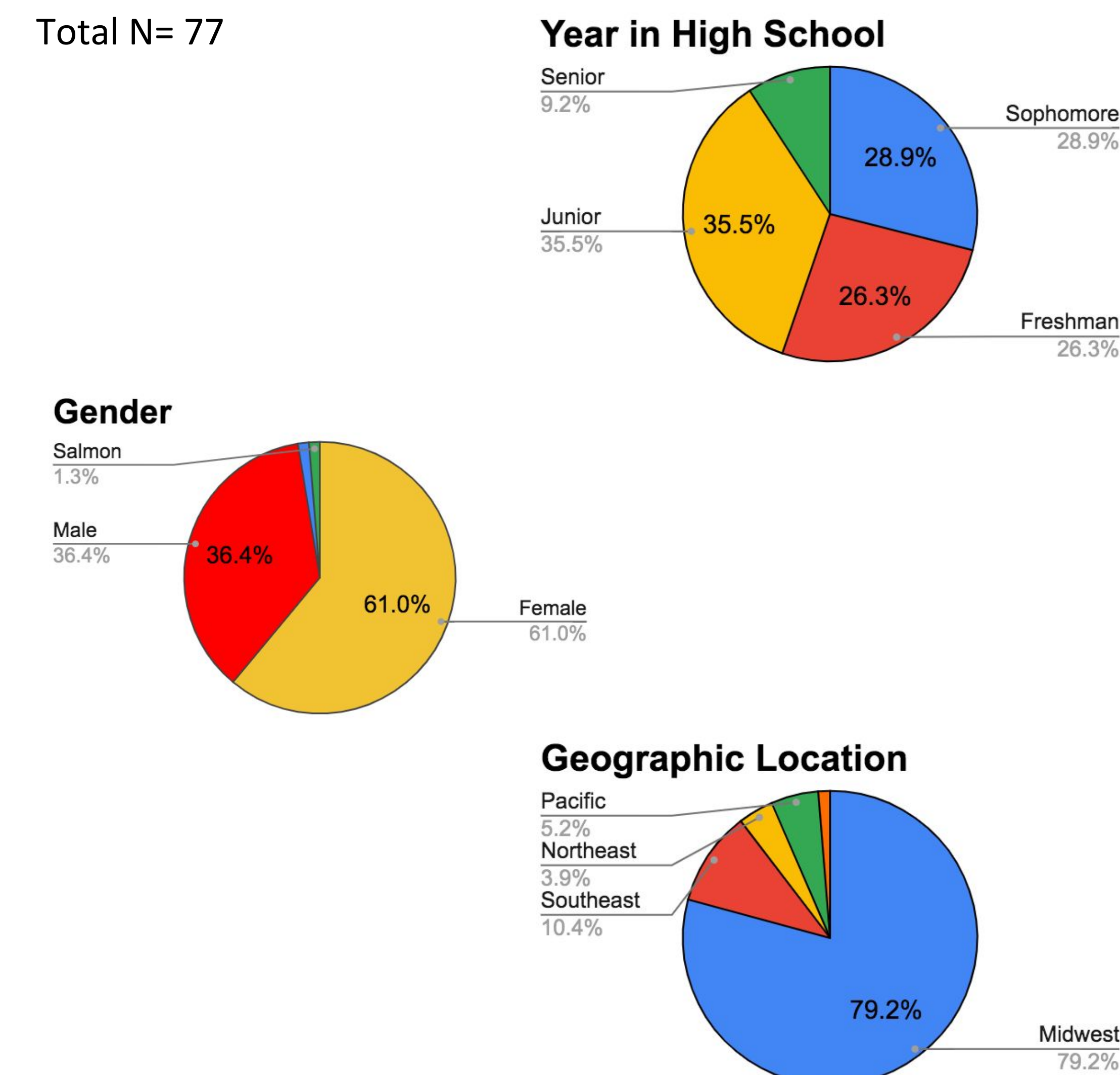
Analyses:

Correlation were used to look at the association between screen time in minutes and hours of sleep. T-tests were used to compare average sleep and average screen time across time points.

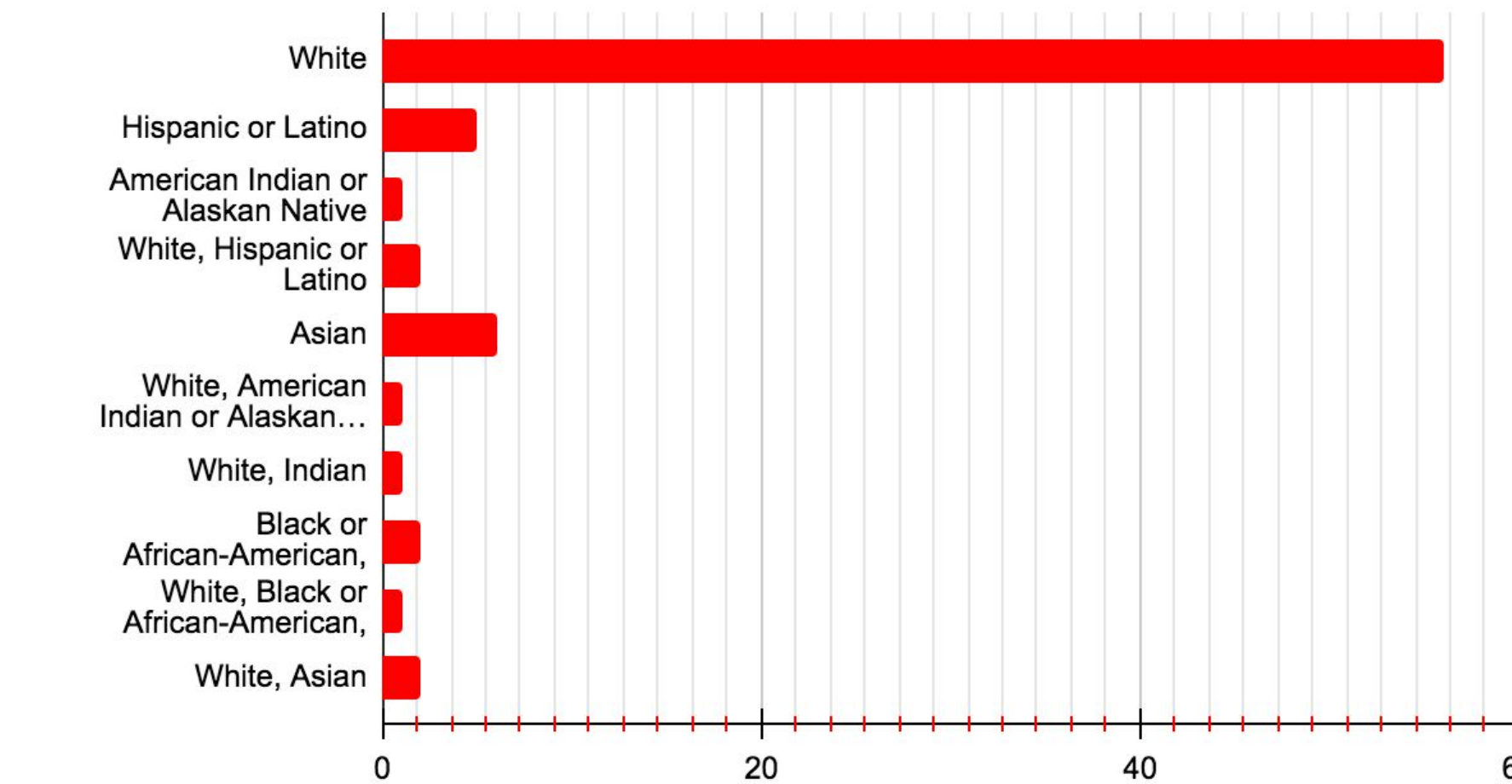
RESULTS

Demographics of the Survey

Total N= 77



Racial and Ethnic Identities chosen



Associations between Sleep and Screen Time across 3 Time Points

Time Point	Correlation Coefficient
JANUARY AND FEBRUARY	-0.18
APRIL AND MAY	0.15
JUNE AND JULY	0.07

All of the three correlation coefficients demonstrated a weak or non-existent correlation.

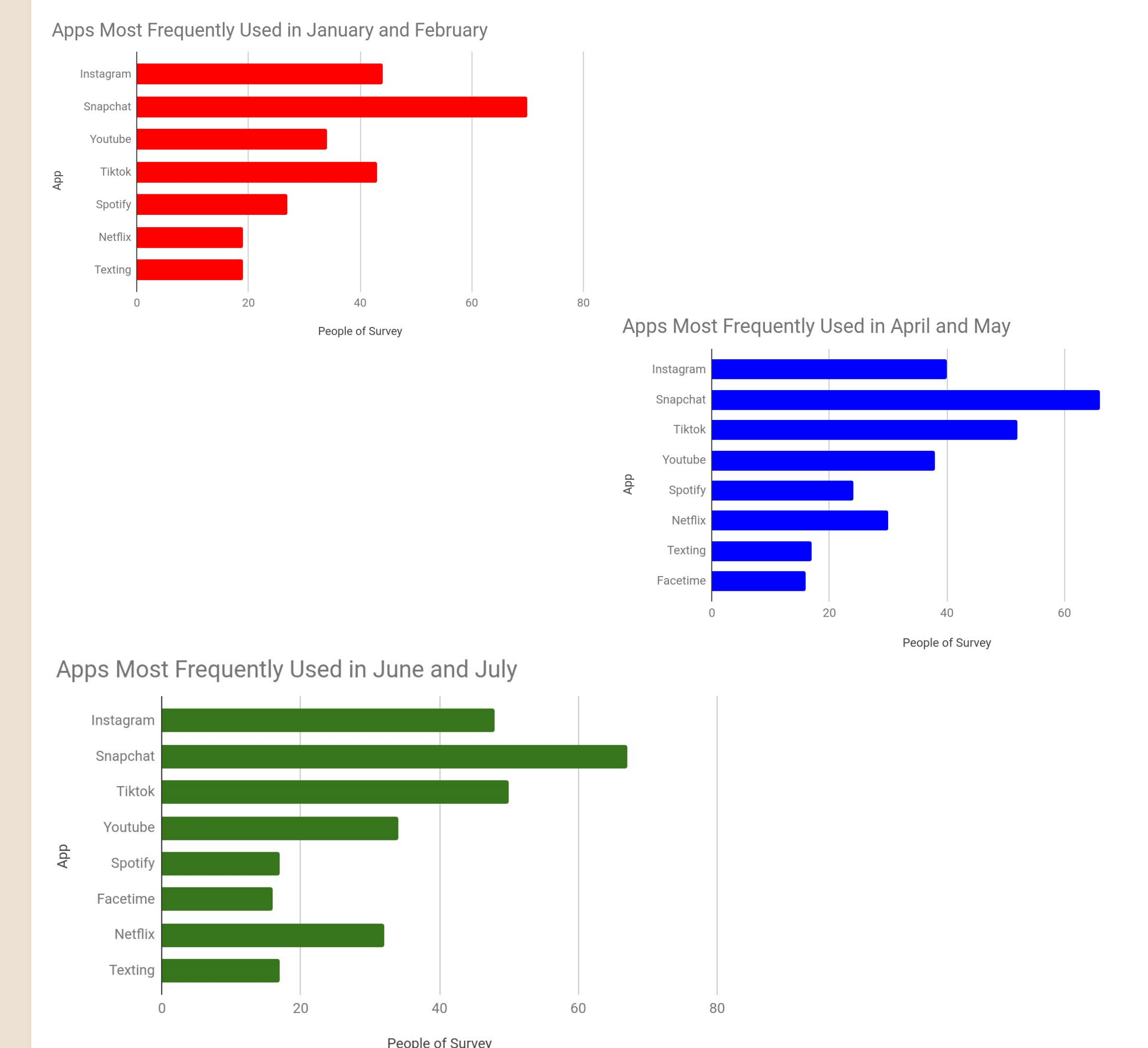
RESULTS

Comparison of Sleep and Screen Time Pre- and During COVID

SLEEP T-TEST	Mean (min)	Standard Deviation	P value
January/February versus April/May	409.091	77.700	0.000*
January/February versus June/July	409.091	1- 77.700	0.000*
April/May versus June/July	484.675	92.218	0.334
June/July	494.026	73.418	
SCREEN TIME T-TEST	Mean (min)	Standard Deviation	P value
January/February versus April/May	285.013	94.789	0.415
January/February versus June/July	285.013	94.789	0.420
April/May versus June/July	401.169	159.567	0.382
June/July	401.169	159.567	

*significant at the $p < .01$ level

Most Frequently Used Apps Pre- and During COVID



CONCLUSIONS

- As predicted, sleep during the pandemic was significantly greater than sleep before the pandemic.
- Counter to predictions, screen time during COVID was not significantly higher than screen time before COVID
- There was no correlation between minutes of sleep and minutes of screen time.
- The top 5 apps did not change between January- June.
- One limitation of this study is that the sample was not diverse. If I were to do the survey again, I might try to distribute nationwide on a platform like TikTok.
- School officials and doctors can use this data to understand teens' sleep and screen habits while schooling from home.

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