

Impact of the COVID-19 Pandemic on Students' Behavior and Well-being

Presented By,

Aisha Naseema

Kushala Rani Talakad Manjunath

Mingyang Mei

Sashwat Desai

Yixiao Zhang

INTRODUCTION

- COVID-19 pandemic forced unprecedented shifts in education worldwide
- Abrupt transition to remote learning environments
- Study investigated 1,182 student responses on:
 - Time allocation patterns
 - Digital behaviors
 - Health outcomes and well-being
- Research focused on the Delhi-NCR region and beyond

DATA ANALYSIS APPROACH

- Chi-square tests for associations between categorical variables
- ANOVA for comparing means across groups
- Logistic regression to predict health outcomes
- Correlation analysis to identify relationships between variables
- Ordinal regression for online learning experience factors

Key Finding 1: Health and Time Allocation

- Students with and without health issues showed similar sleep patterns (avg 7.87 hours) Physical activity was a protective factor:
 - Healthier students spent more time on fitness (0.780 vs 0.675 hours)
 - Significant negative association between fitness time and health issues
- Sleep duration negatively associated with health issues (protective effect)
- TV watching time showed weak positive association with health issues

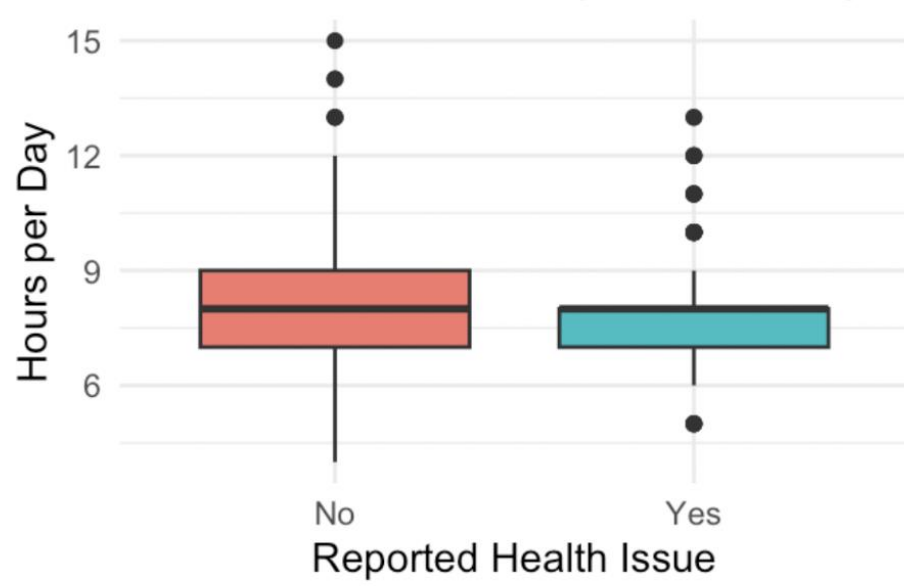


Figure 3.1: Sleep Time vs Health Issues

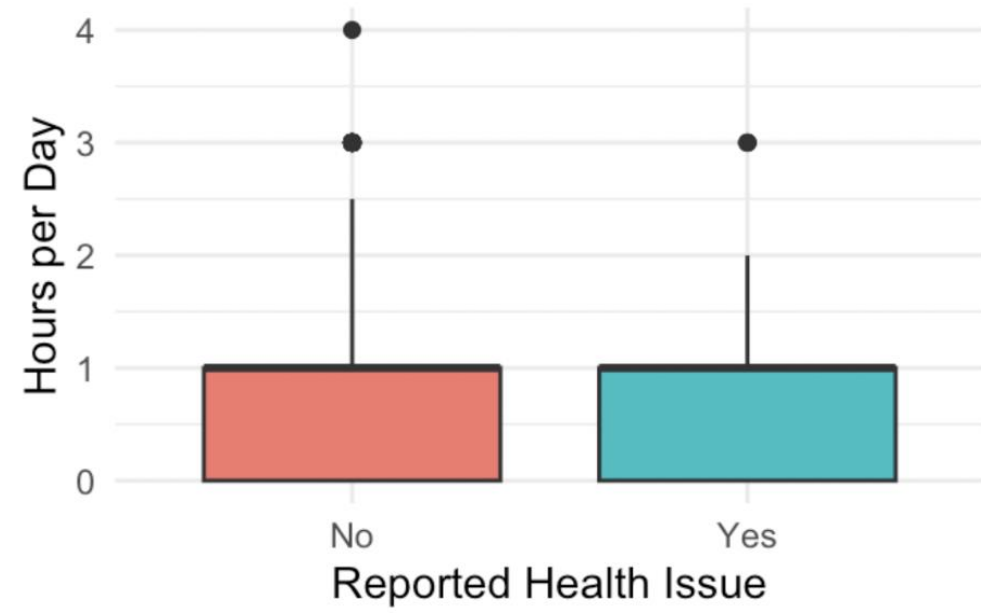


Figure 3.2: Fitness Time vs Health Issues

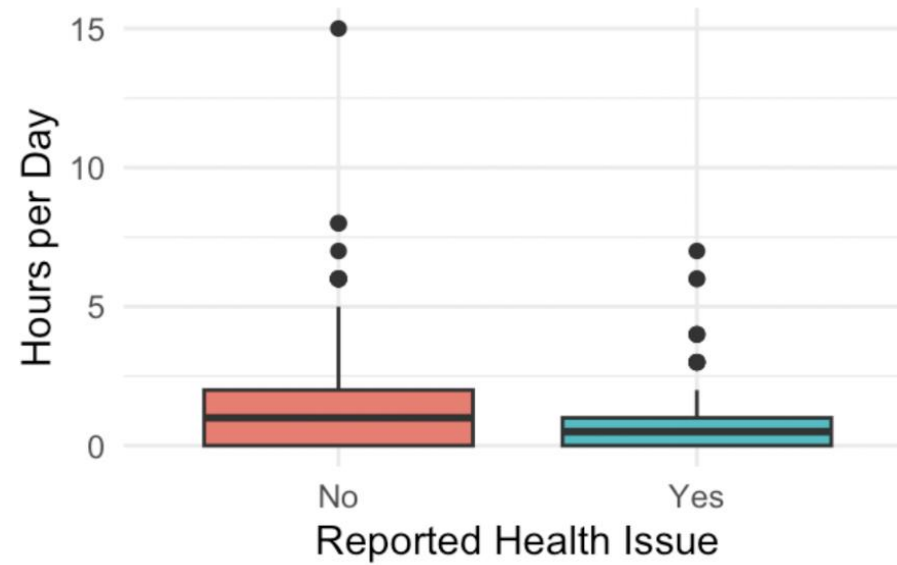


Figure 3.3: Time Spent Watching TV vs Health Issues

Key Finding 2: Weight Change Dynamics

- Significant association between weight change and health status ($\chi^2 = 10.05$, $p = 0.001524$)
- Students reporting decreased weight:
 - Spent more time on fitness (0.947 hours)
 - Spent less time on social media (2.46 hours)
- Students reporting increased weight:
 - Spent less time on fitness (0.681 hours)
 - Spent more time on social media (2.52 hours)
- Self-study time did not significantly differ across weight change groups

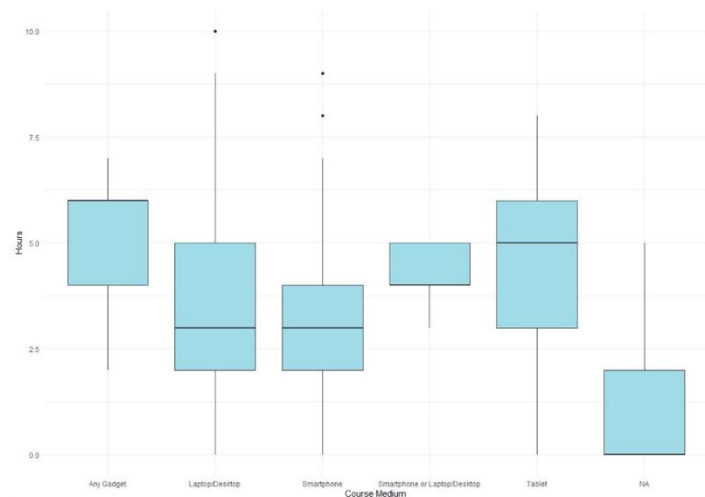


Figure 3.6: Analysis of Hours Spent Studying for Different Media

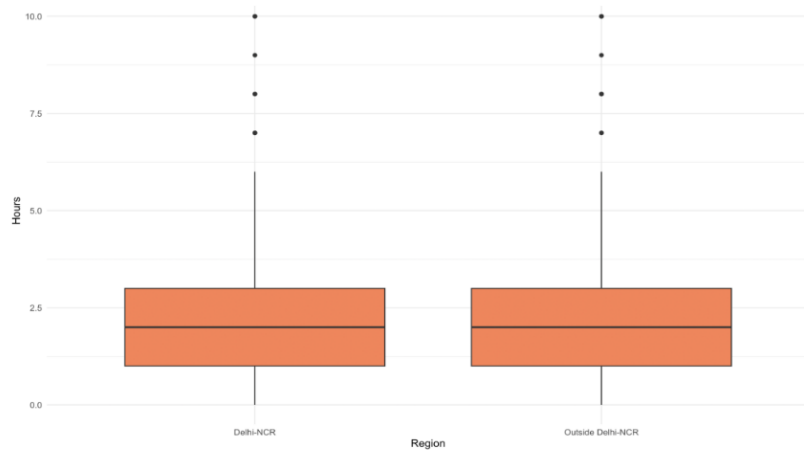


Figure 3.7: Social Media Usage by Region

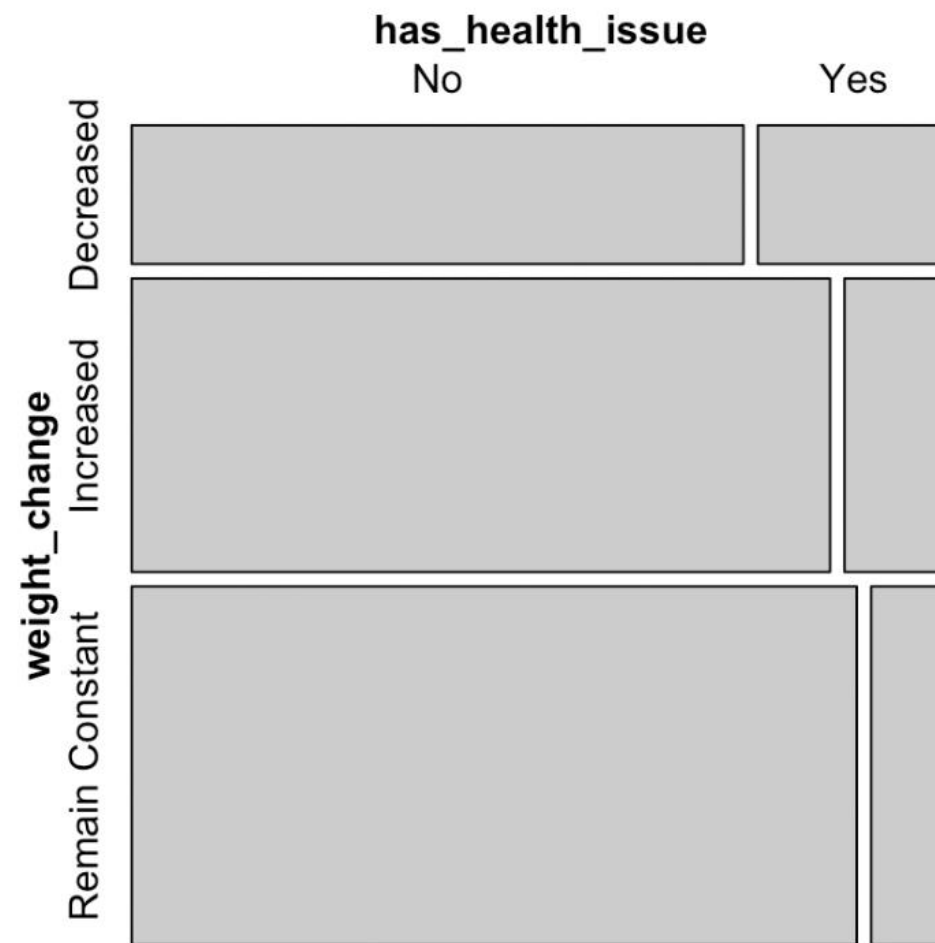


Figure 3.4: Change in Weight vs Health Issues

Key Findings 3: Social Media Usage Patterns

- Platform preferences showed strong concentration:
 - Facebook, WhatsApp, and YouTube dominated
- Social media usage consistent across regions (~2.0 hours median)
- Significant negative correlation between self-study and social media time ($r = -0.16$, $p < 0.001$)
- Younger students spent more time on social media, less on online classes

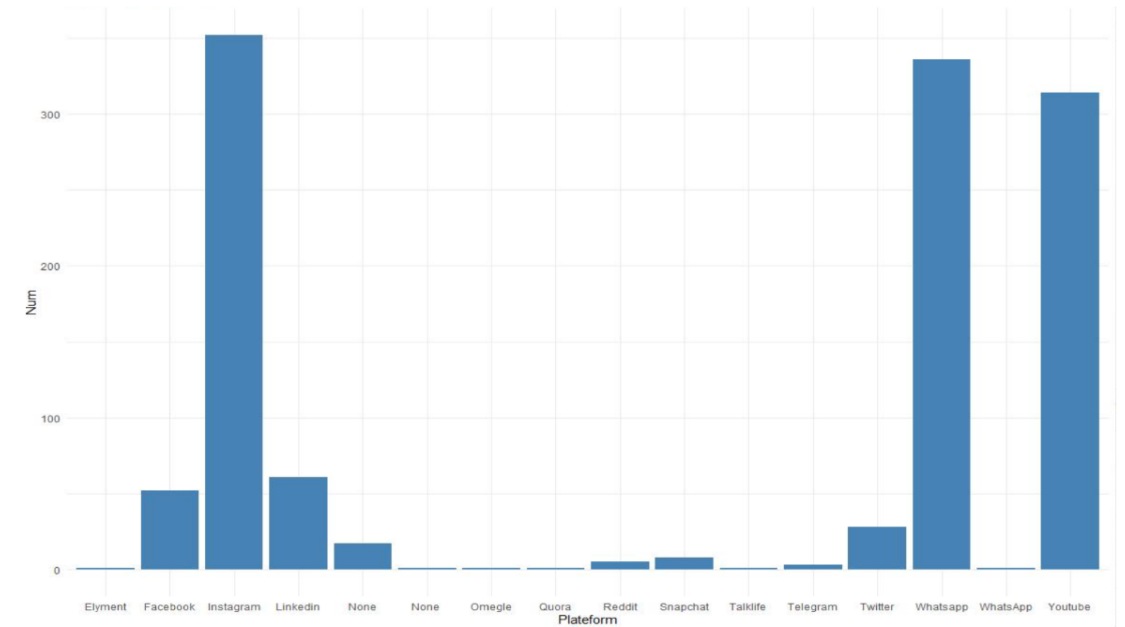


Figure 3.8: Social Media Usage Patterns

Correlation Analysis

- Strong correlation between total time spent and self-study time ($r = 0.73$) Academically engaged students had more structured time usage
- Moderate negative correlation between sleep and self-study ($r = -0.22$) Some students sacrificed sleep for academic work
- Students with better health reported more effective time utilization Time management skills may mediate pandemic health outcomes

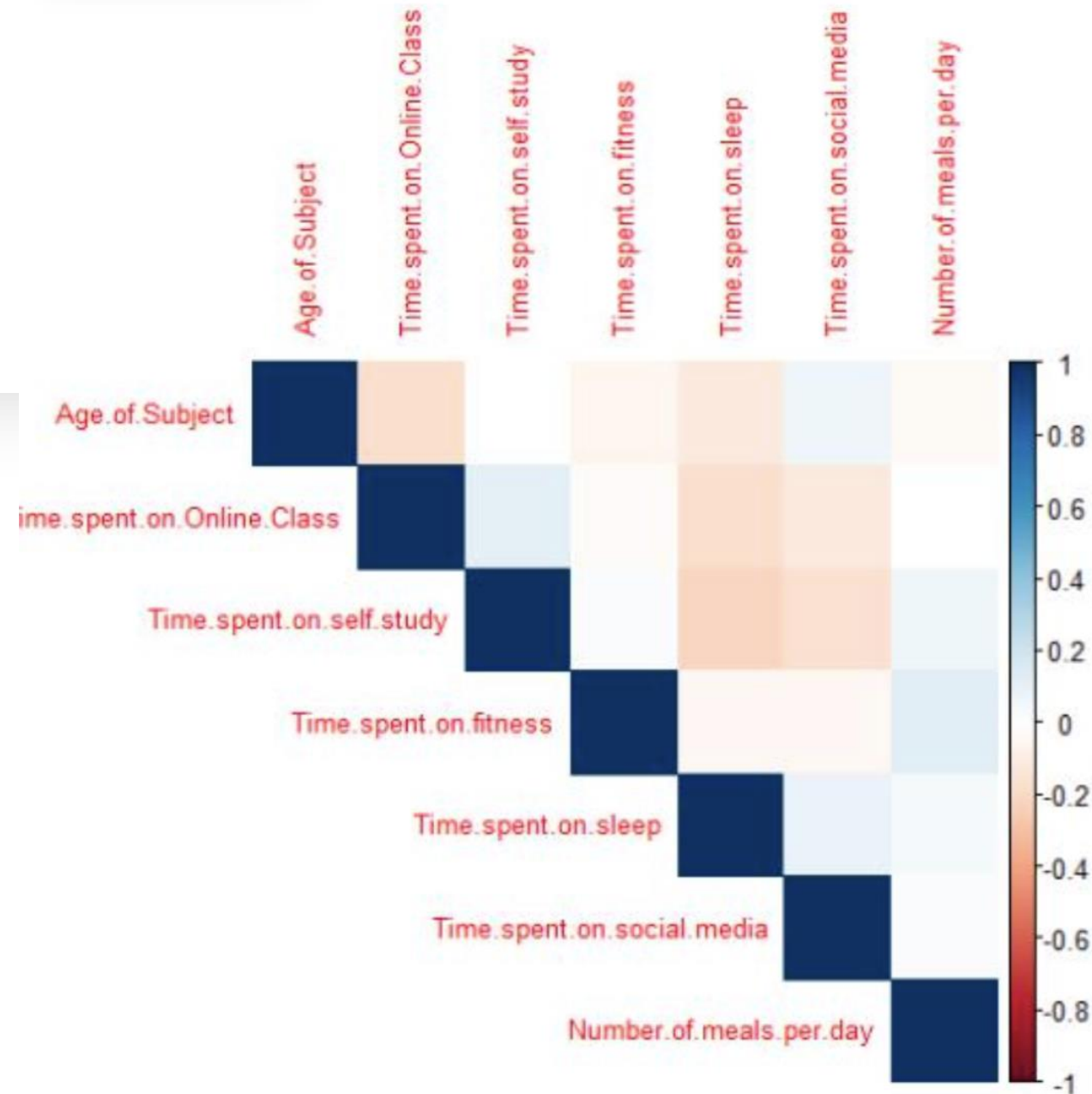


Figure 3.9: Correlation Analysis

Statistical Analysis

- **Chi-Square Tests:** Examined association between weight change and health issues ($\chi^2 = 25.197$, $p = 3.378 \times 10^{-6}$)
- **T-Tests:** Compared fitness time between health status groups ($t = -1.7039$, $p = 0.08986$)
- **ANOVA:** Analyzed differences in self-study time across weight change groups ($F = 1.028$, $p = 0.358$)
- **Logistic Regression:** Predicted health issues based on time allocation patterns (sleep, fitness, TV, meals)
- **Ordinal Regression:** Identified factors affecting online learning experience ratings

Limitations & Future Research

Limitations:

- Cross-sectional data, no longitudinal insights
- Potentially limited regional representativeness
- Self-reported measures may have recall bias

Future Research:

- Longitudinal studies on adaptation patterns
- Investigate unexpected association between meal frequency and health
- Experimental studies comparing learning platforms
- Deeper exploration of time management interventions

Conclusion

- Physical activity emerged as significant protective factor for health Trade-offs between academic and leisure activities affected well-being
- Moderate online class time (4-6 hours) associated with optimal satisfaction
- Device choice significantly impacted learning experience
- Time management skills may mediate pandemic-related health outcomes
- Research provides foundation for developing student support systems in digital learning environments

The background features a light blue and white hexagonal pattern. Overlaid on this are several stylized virus particles, which are circular with multiple protruding spikes. The particles vary in size and opacity, with some appearing more prominent than others. The overall aesthetic is clean and modern, typical of medical or scientific branding.

THANK YOU