



# Investigating differences in adolescent technology use and mental health outcomes

Kole Binger BS.<sup>1</sup>; Qianqian Zhao MS<sup>1</sup>; Jens Eickhoff PhD<sup>1</sup>, Megan Moreno, M.D, MPH, MSED<sup>1</sup>

<sup>1</sup>University of Wisconsin – Madison

School of Medicine and Public Health, Department of Pediatrics

## BACKGROUND

- Adolescents technology use is nearly ubiquitous
- Technology use has been associated with mental health risks and benefits
- Previous studies focus on quantity of technology use, such as screen time
- Little is known regarding the quality of specific technology use behaviors, and the associations with mental health outcomes

**Purpose:** To understand associations between technology importance and mental health outcomes, including depression and mental well-being

## METHODS

This study was approved by the University of Wisconsin IRB.

### Settings:

- Cross-sectional online survey
- Qualtrics platform and panel
- Nationally-representative, English speakers, 12-18 years

### Measures:

- **Technology importance:** Adolescents' Digital Technology Interactions and Importance (ADTI), including the three subscales:
  - 1: technology to bridge online/offline experiences and preferences
  - 2: technology to go outside one's identity or offline environment
  - 3: technology for social connection
- **Depression:** PHQ-9
- **Mental Well-being:** SWEMWBS
- **Demographic data:** age, gender, race/ethnicity

### Analysis:

- Associations between variables evaluated with non-parametric Wilcoxon rank sum test



Adolescents who were at risk for depression and adolescents who reported higher mental well-being had higher ADTI (technology importance) scores.

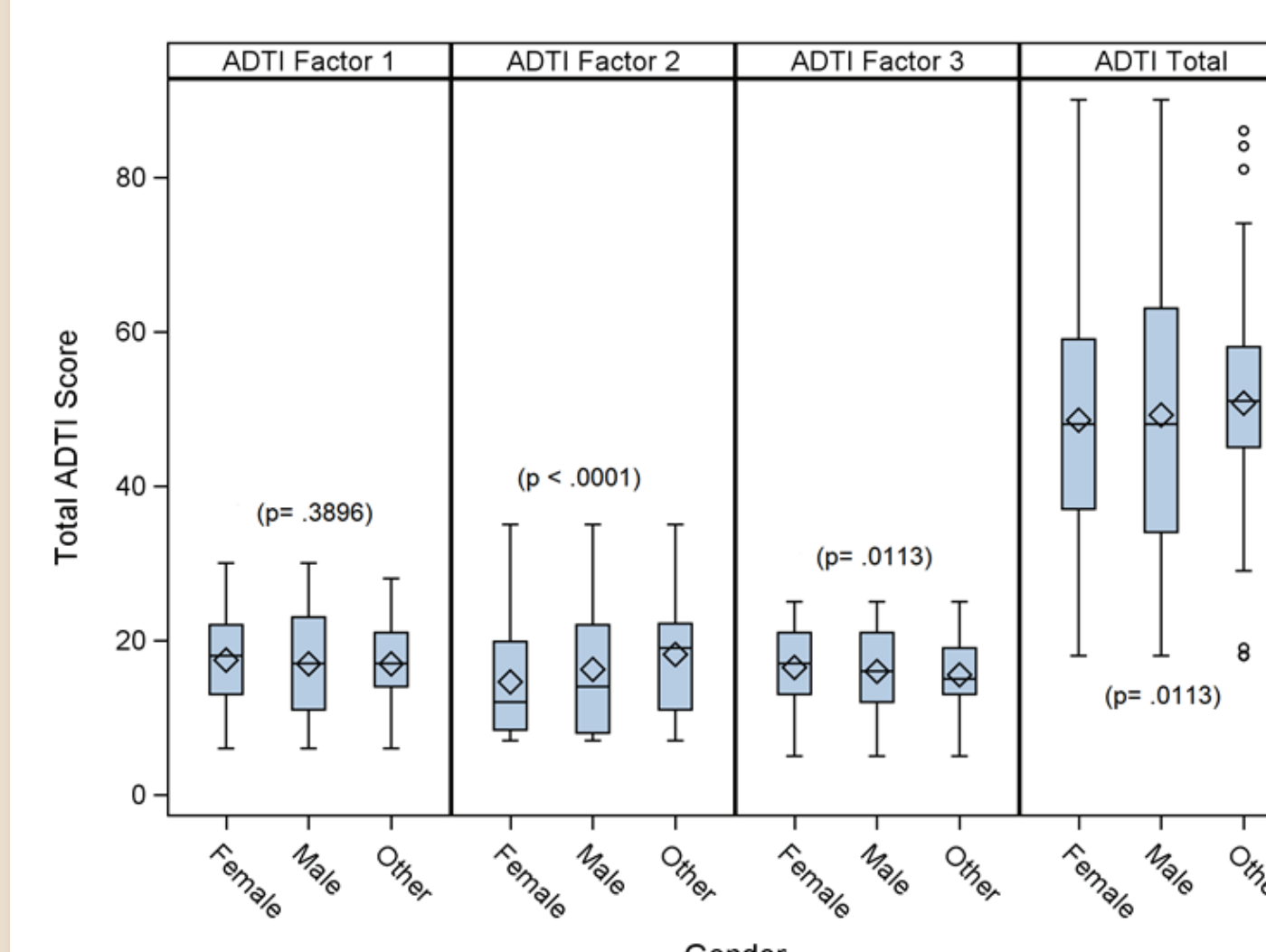
## RESULTS

### Demographics

- 4,592 participants
- 46.4% female
- 66.9% Caucasian
- Average age: 14.6 years SD=(1.7)

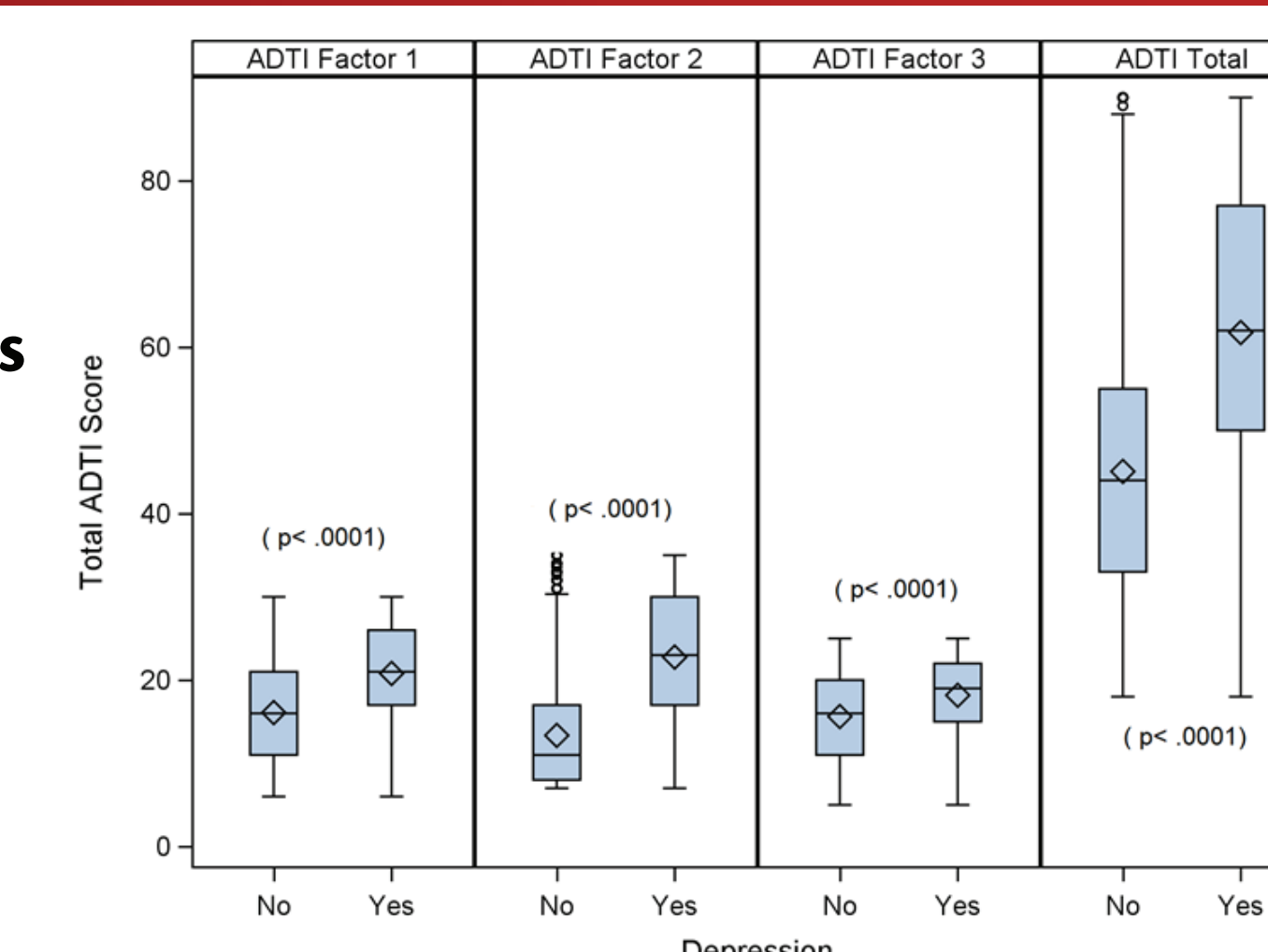
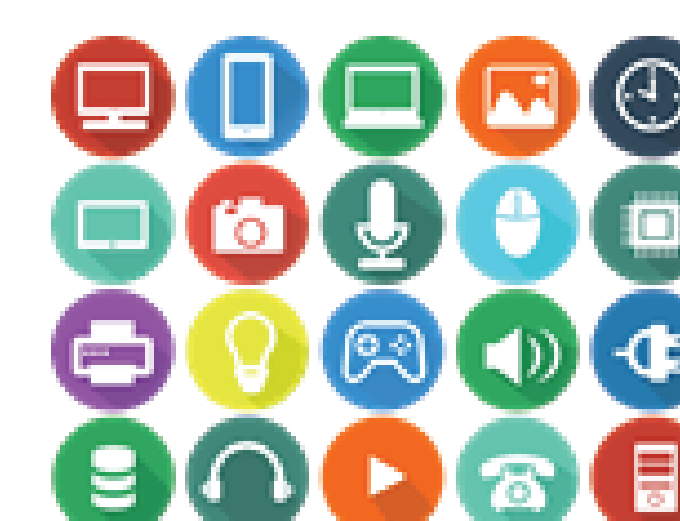
### Technology Importance

- mean score= 48.8, (SD=18.0)
- **No demographic factors were associated with ADTI total score or subscale score**



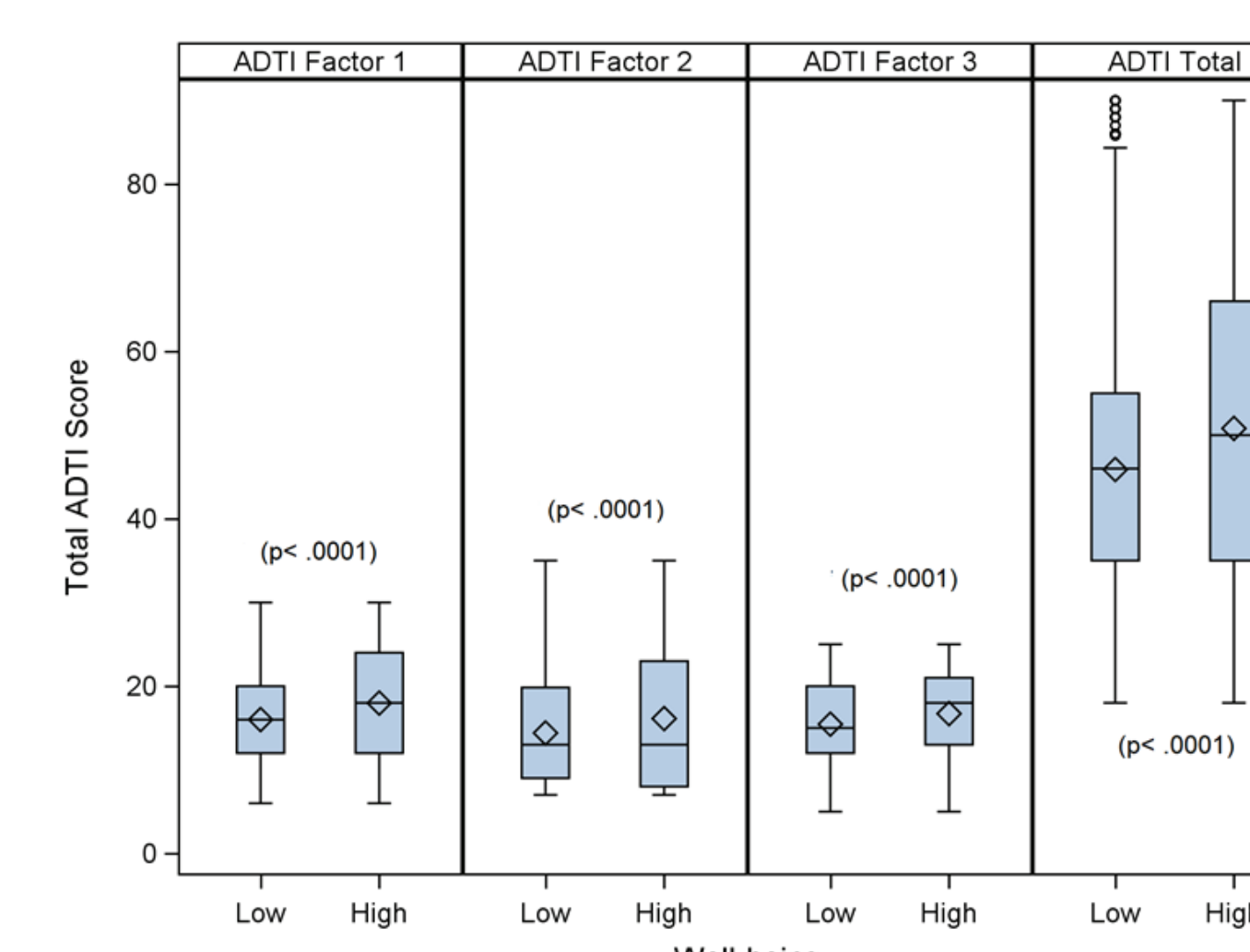
### Depression

- mean score= 5.5, (SD=6.9)
- **Participants with depression had higher ADTI and ADTI subscale scores (61.7 ± 17.3 vs 45.1 ± 16.4, p<0.001),**



### Mental Well-being

- mean score= 26.6 (SD=5.0)
- **Participants with higher mental well-being had higher ADTI and ADTI subscale scores (50.8 ± 19.4 vs 45.8 ± 15.2, p<0.001)**



## CONCLUSIONS

- ADTI scores were higher among adolescents who were *at-risk for depression* and among adolescents with *higher reported mental well-being*
- Future studies should explore the possibility that digital technology use intensifies either the positive or the negative mental states that adolescents bring to their online environments
- Clinicians should discuss healthy technology behaviors with adolescents regardless of their mental health status

## ADDITIONAL KEY INFORMATION



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### Author Contact information:

Kole Binger, BS

[kbinger@wisc.edu](mailto:kbinger@wisc.edu)

Megan Moreno, MD, MSED, MPH

[moreno@wisc.edu](mailto:moreno@wisc.edu)

