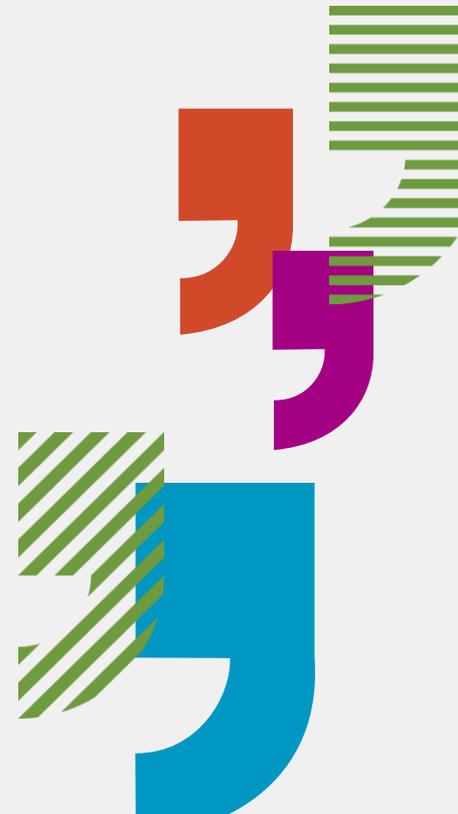


# Teens, Screens, & the Summer of COVID-19

*Paul Weigle, MD*

*Pediatric Clinician Mental Health ACCESS  
Forum*

*June 18<sup>th</sup>, 2020*



# Agenda

- Screen time
- Why habit-forming?
- Health effects
- How to advise kids & parents



# How Much Are Youth On Screens?



# Typical Habits

2000 – 2019 screen time  
**doubled**

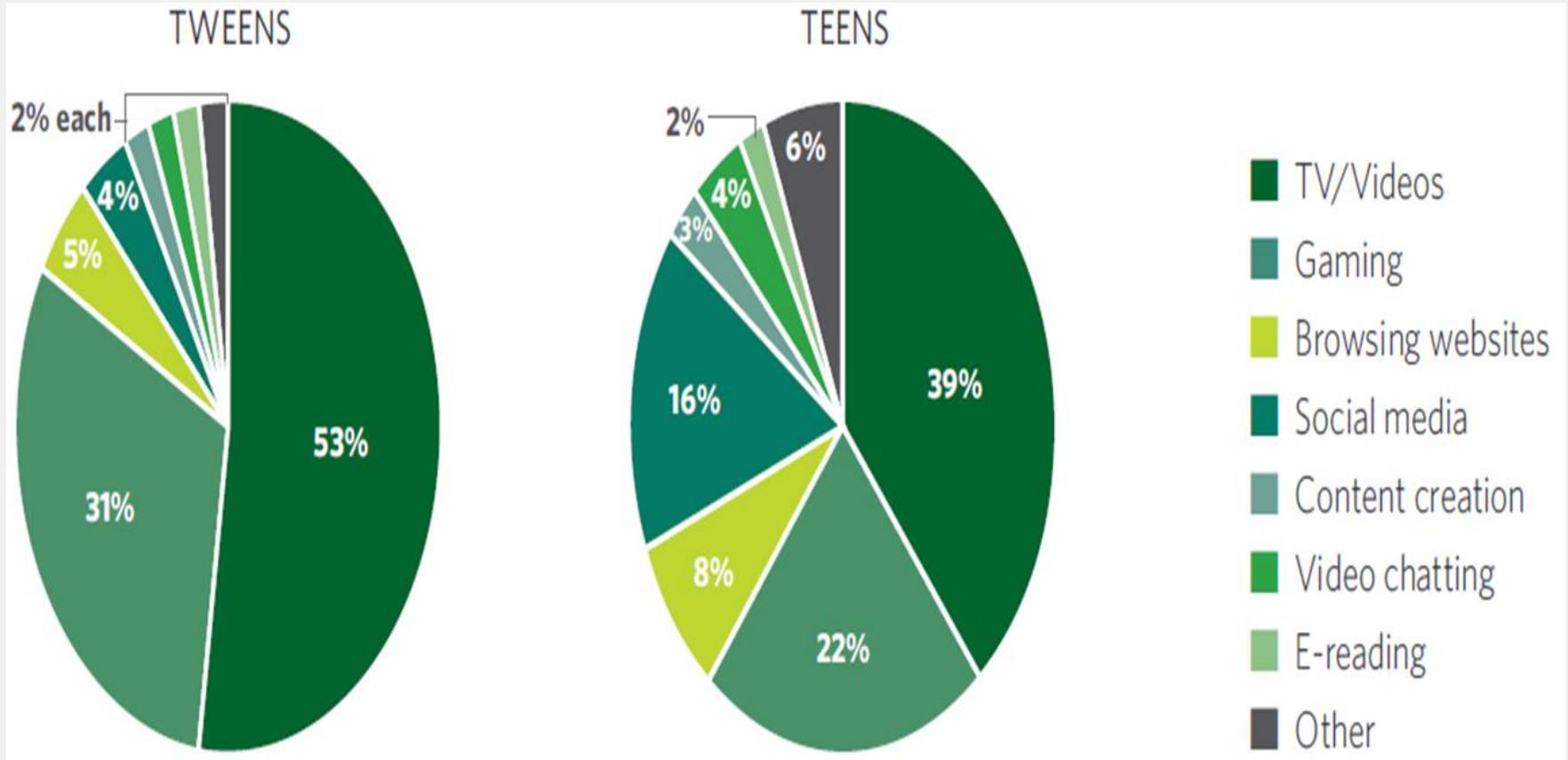
Children: 4 hours 44 minutes

Teens: 7 hours 22 minutes

*Source: Kaiser Family Foundation '00 &  
Common Sense Media '19*



# What Are They Doing Online?



# Moving Childhood onto Screens



Photo by Jordan Whitt on Unsplash

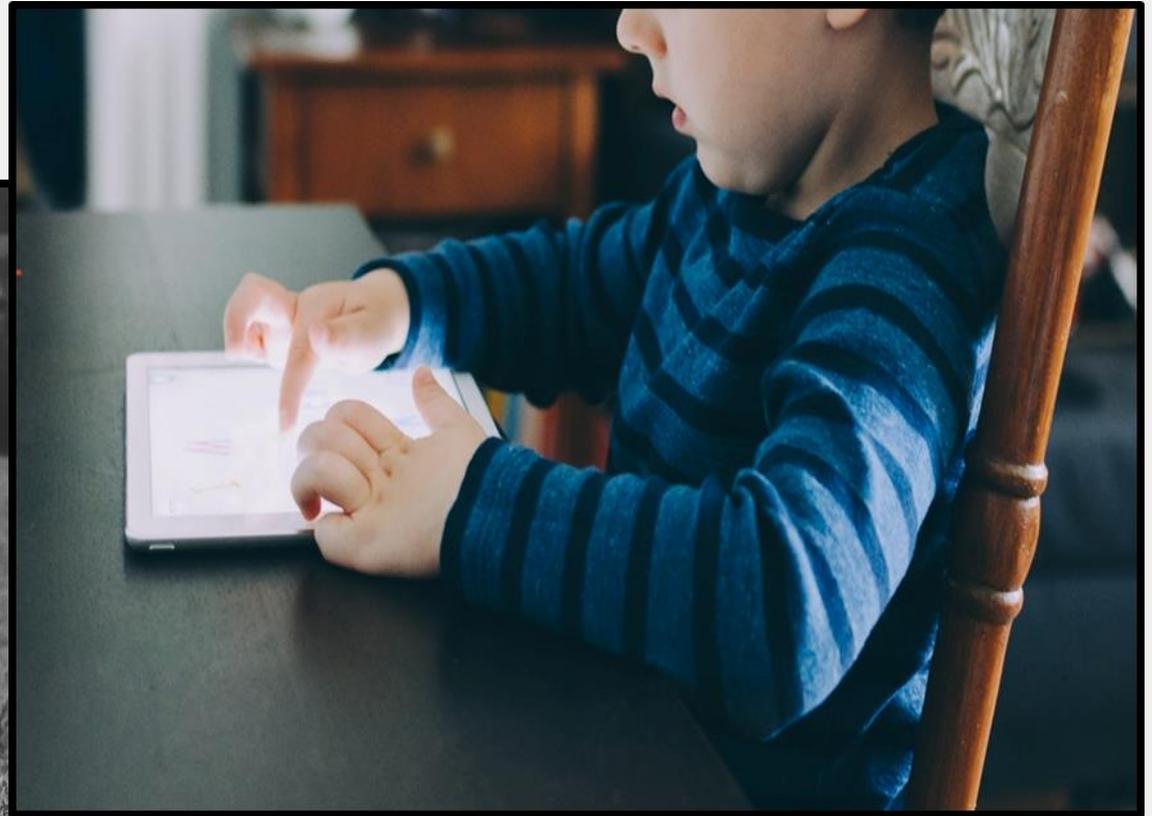
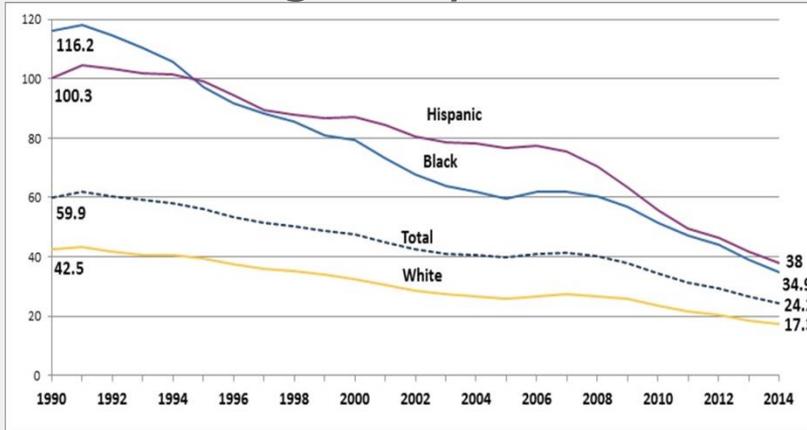


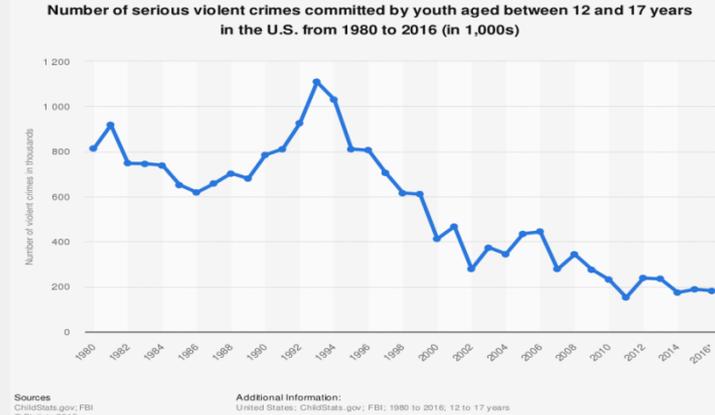
Photo by Kelly Sikkema on Unsplash

# Decreased **Risky** Behaviors Among Teens

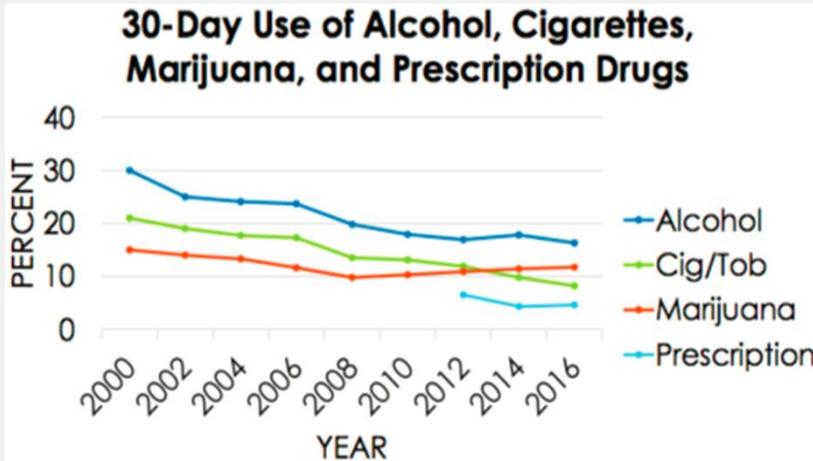
## Pregnancy



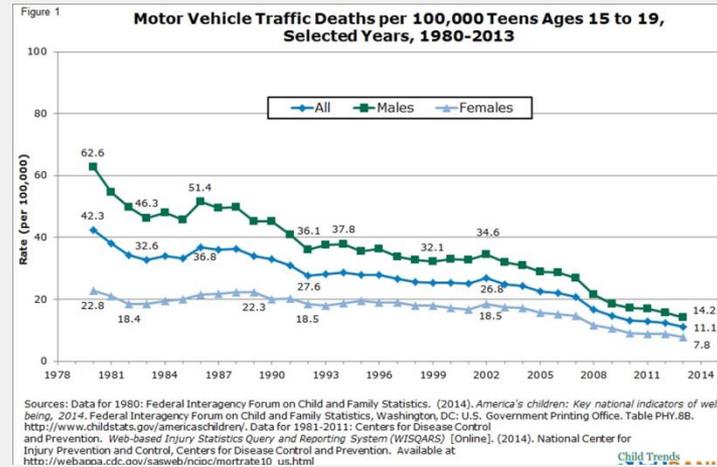
## Violent Crime



## Drug Use

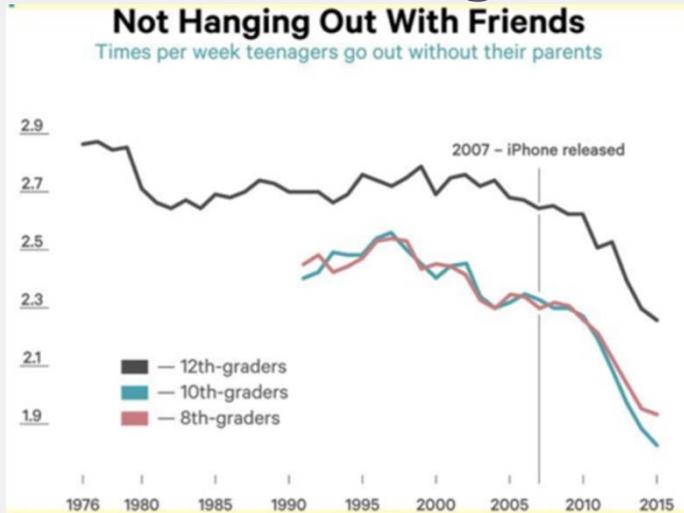


## Motor Vehicle Deaths

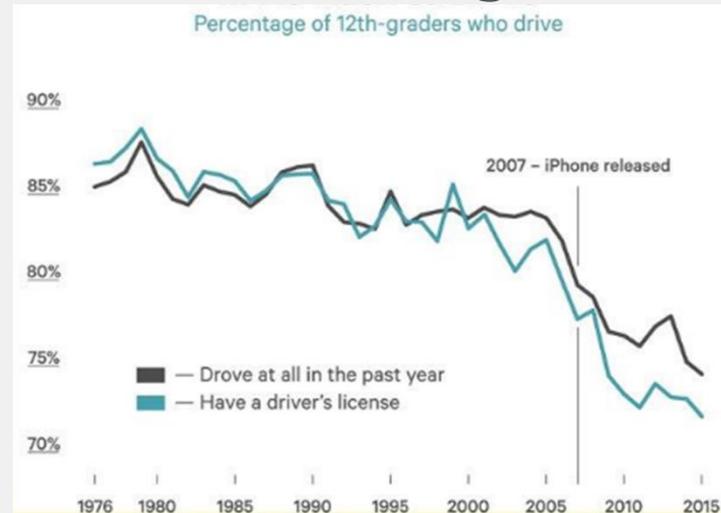


# Decreased **Healthy** Behaviors Among Teens

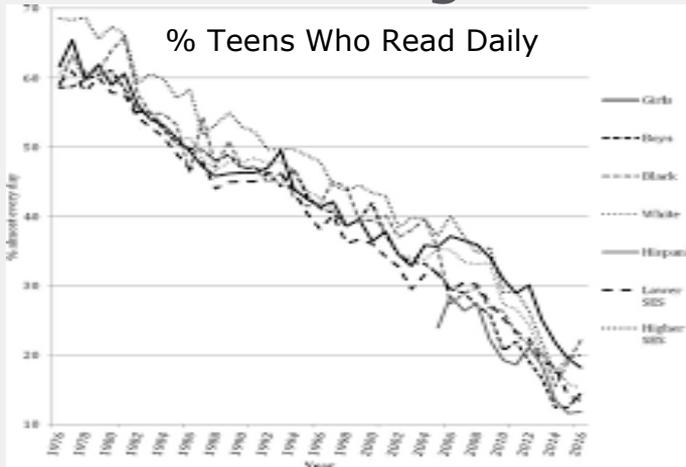
## Socializing



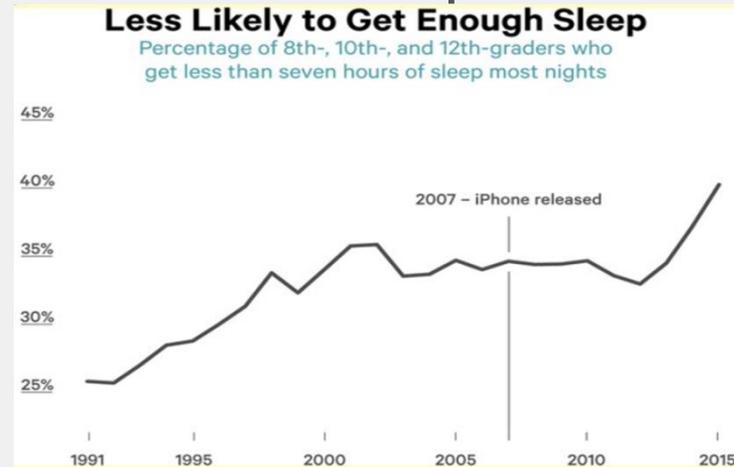
## Driving



## Reading

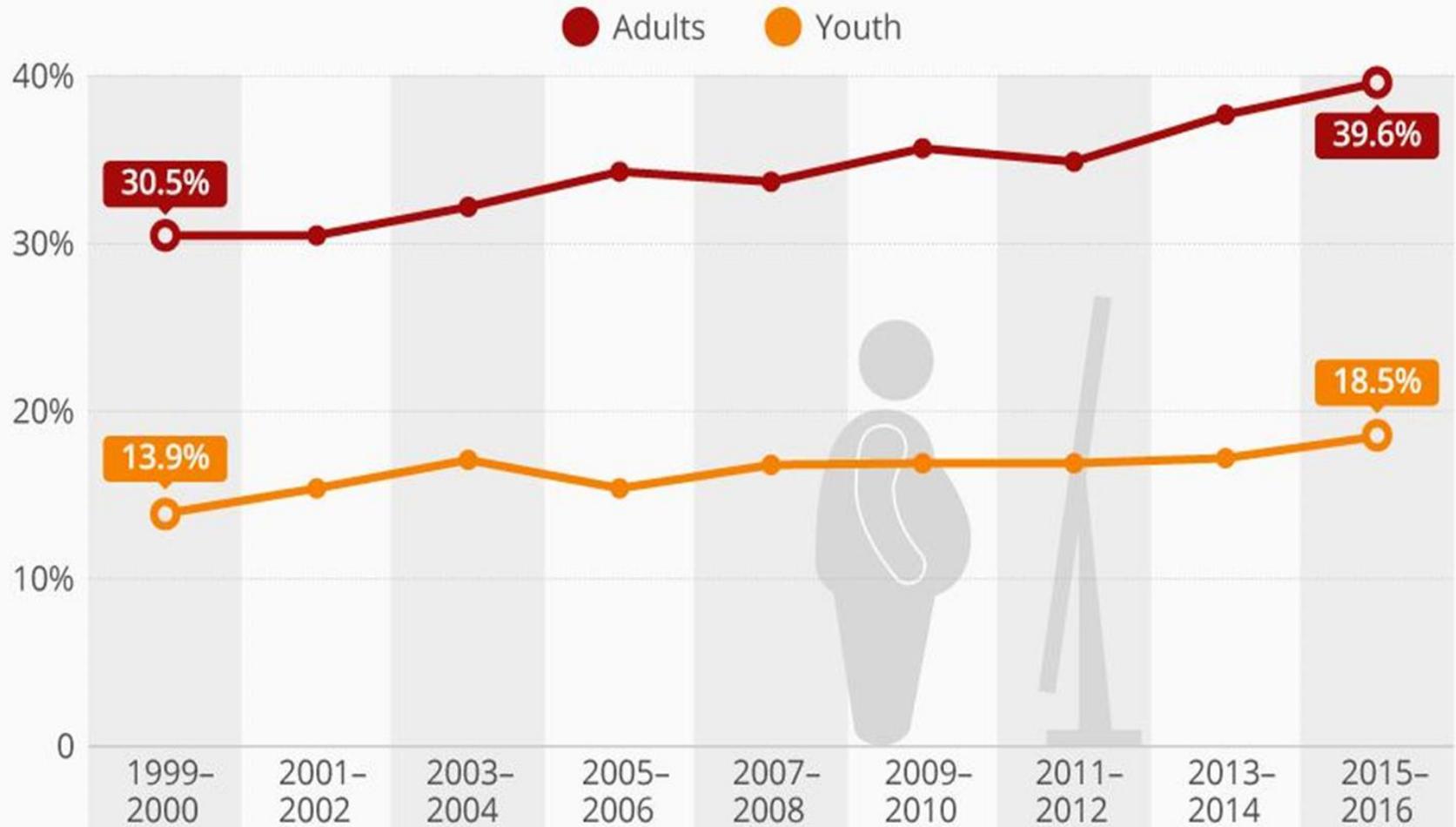


## Sleep



# Obesity

Obesity prevalence among adults and youths in the U.S.\*



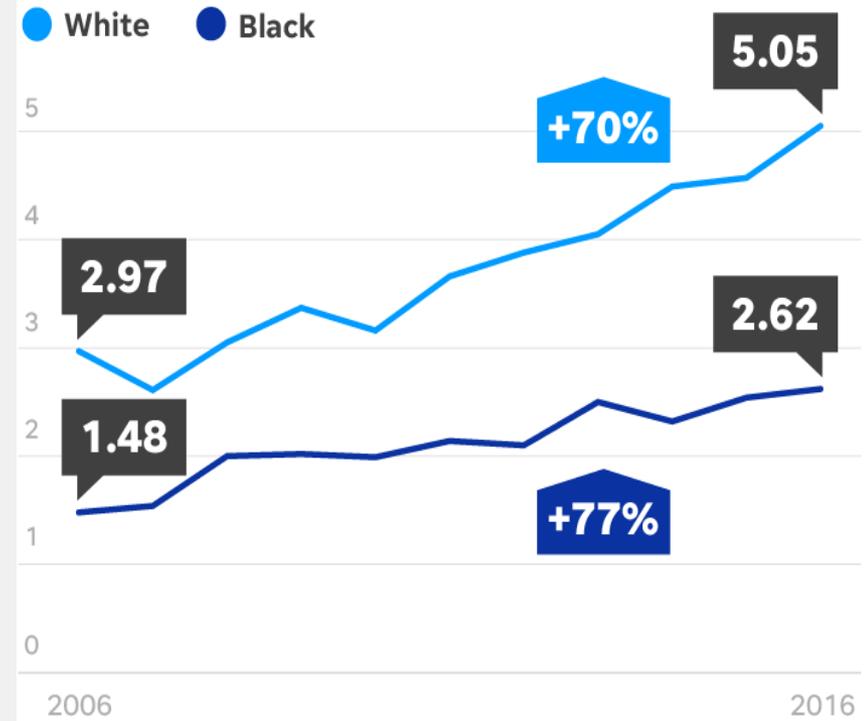
# Teen Mental Health Crisis

- Depression & anxiety
- Self-harm
- Suicide
- Teens online most at greatest risk



## Teen suicide is soaring. The biggest rate increase was among black youth

Suicides per 100,000 10-to-17 year-olds from 2006 to 2016:



SOURCE Centers for Disease Control and Prevention

# Screen Time Versus Health

- Systemic review of 32 studies: strong, consistent evidence linked screen time to **depression & distress** (*Hoare '16*)
- Review of 235 studies: associated w **behavior problems, low self-esteem & poor physical fitness** (*Carson '16*)



# Screens vs. Sleep

- Sufficient sleep needed for learning, protects against obesity, depression, anxiety, & suicidality
- Screens displaces sleep
- Blue light
- Arousal
- Circadian rhythms
- Screens in bed decondition



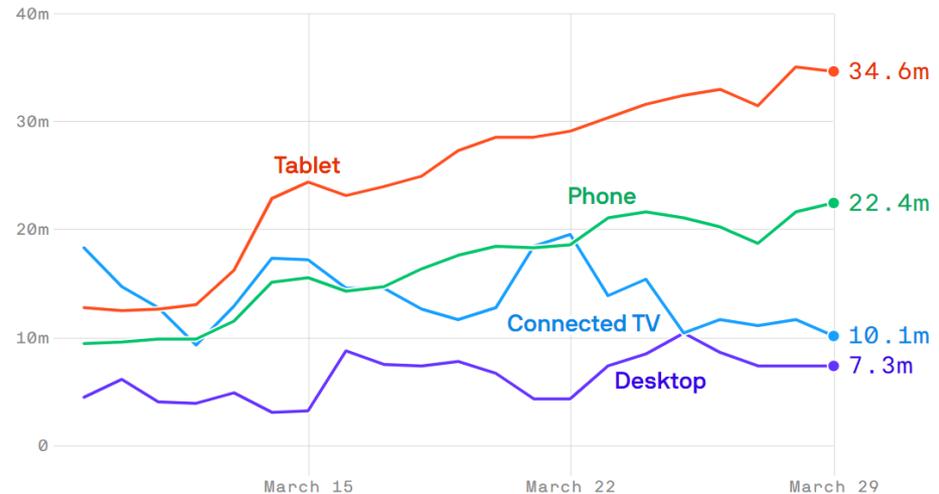
# Teens & Screens & COVID:19

The New York Times

*Coronavirus Ended the Screen-Time Debate. Screens Won.*

## U.S. traffic from kids' apps and services by device

March 9 to March 29, 2020



Data: [SuperAwesome](#) ; Chart: [Axios Visuals](#)

- Survey of 3000 parents in April indicates screen time among youth **doubled** in a month (*Parents Together '20*)
- February to March: traffic to children's apps increased 70%
- In summer, screen time likely to **increase** further

# Why Are Video Games Habit Forming?



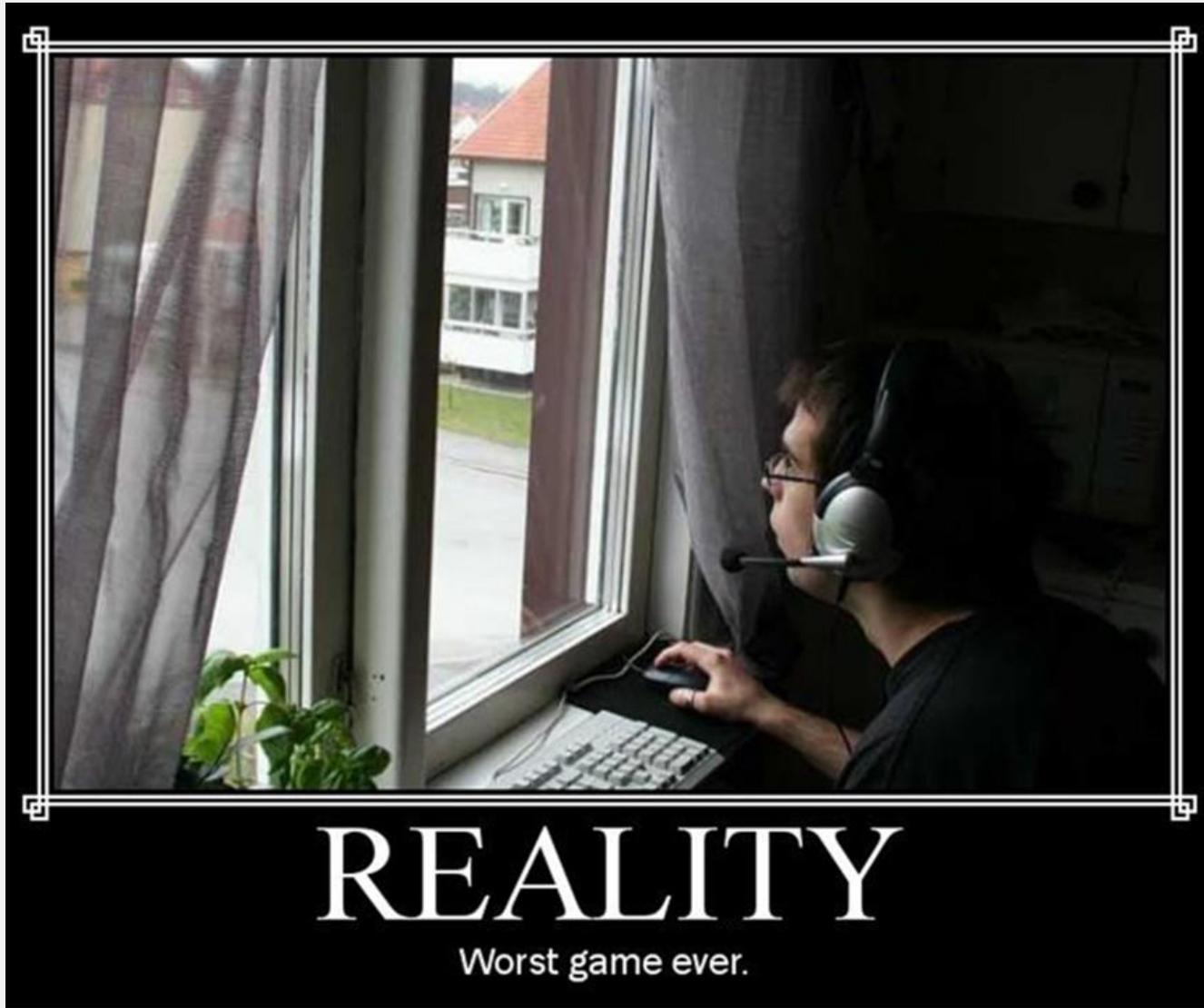
# Pretend



# Be All You Can't Be



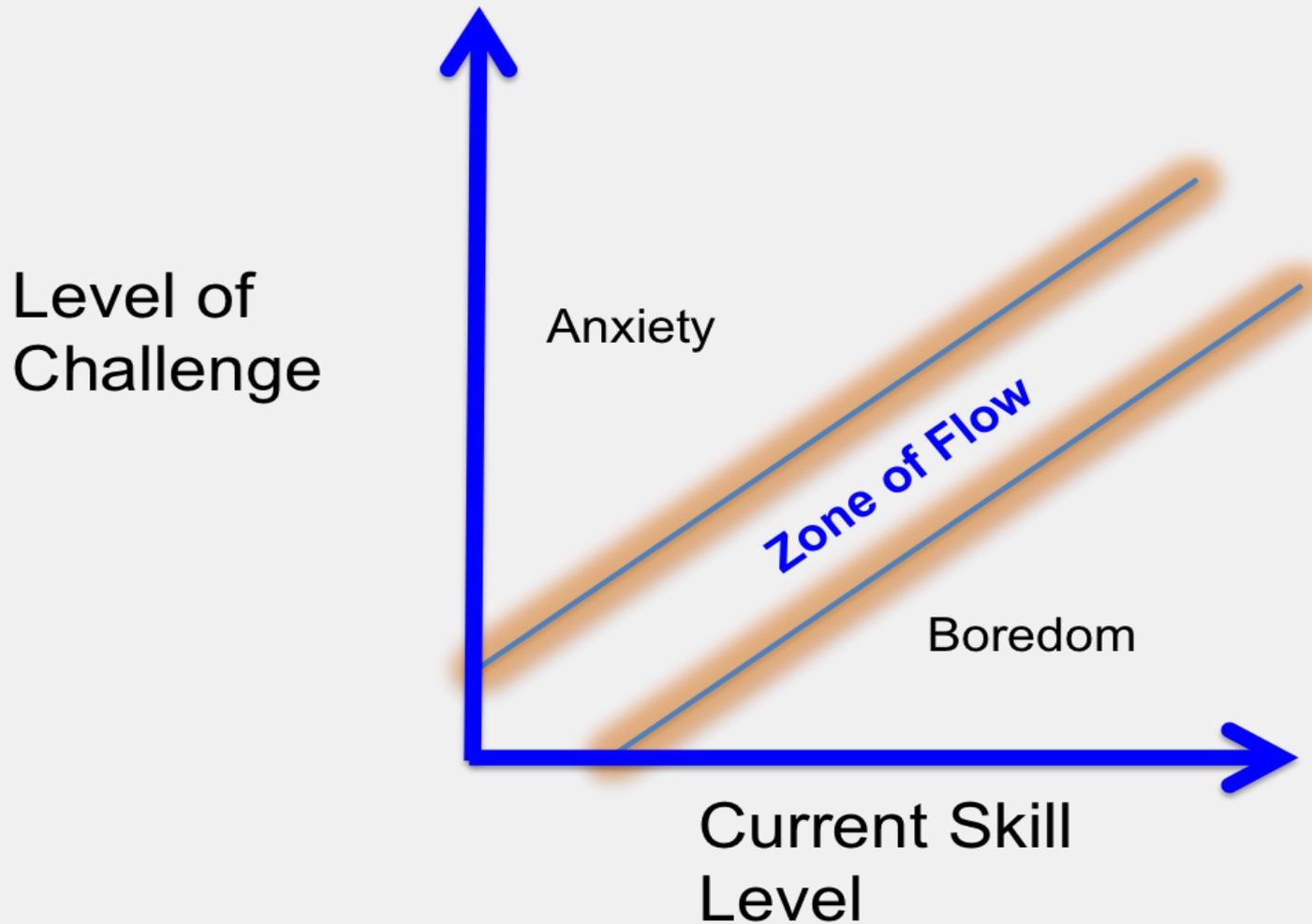
# Escapism





**Flow:** state of being fully immersed in activity, feeling focus & enjoyment

# Flow State Depicted Visually



# Video Game Flow





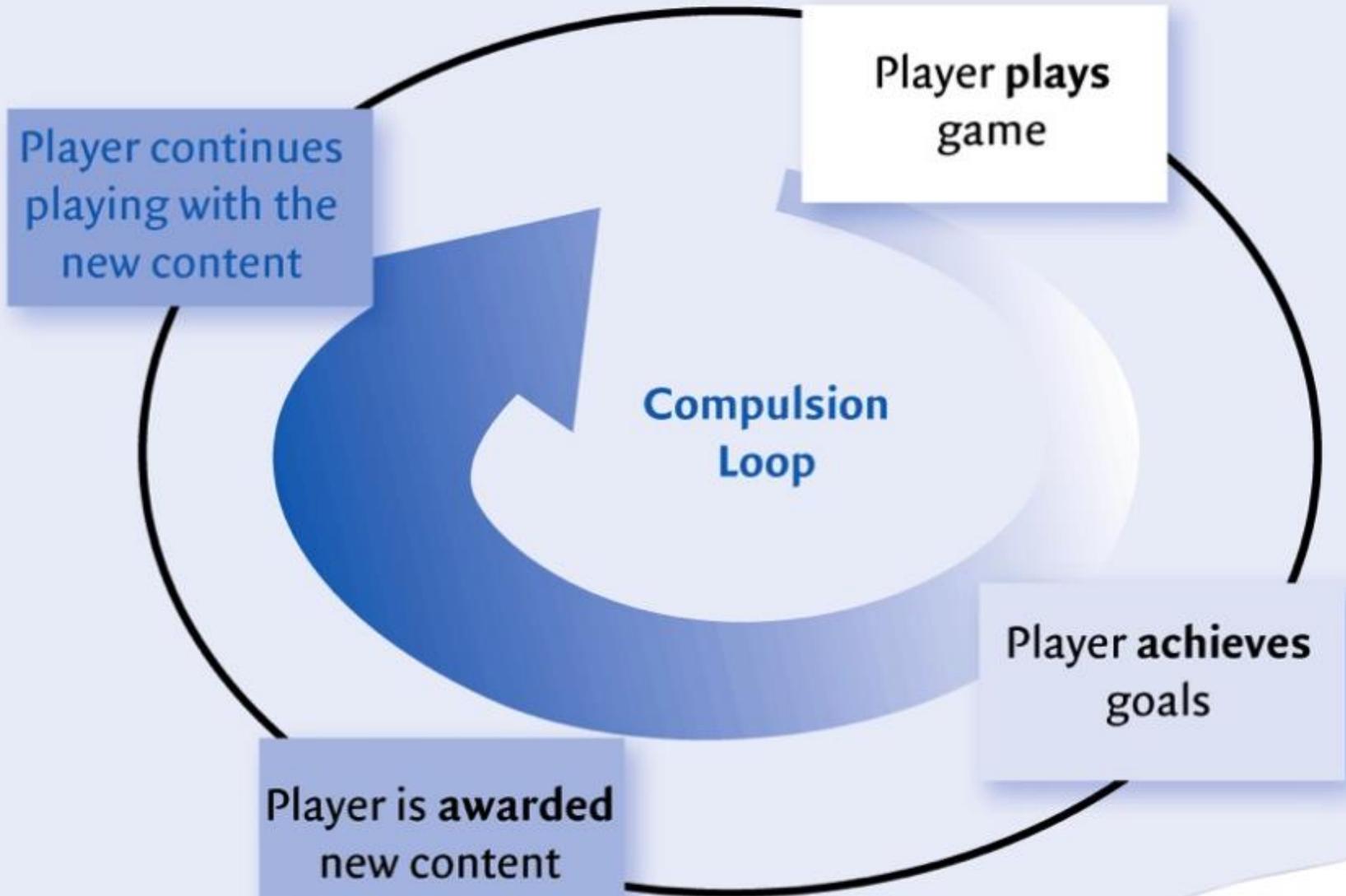
*Teens, Screens & Summer of COVID-19 ~ June 18th, 2020*





# No Stopping Cues





# Psychological Needs

Self determination theory



# Autonomy



# Competence



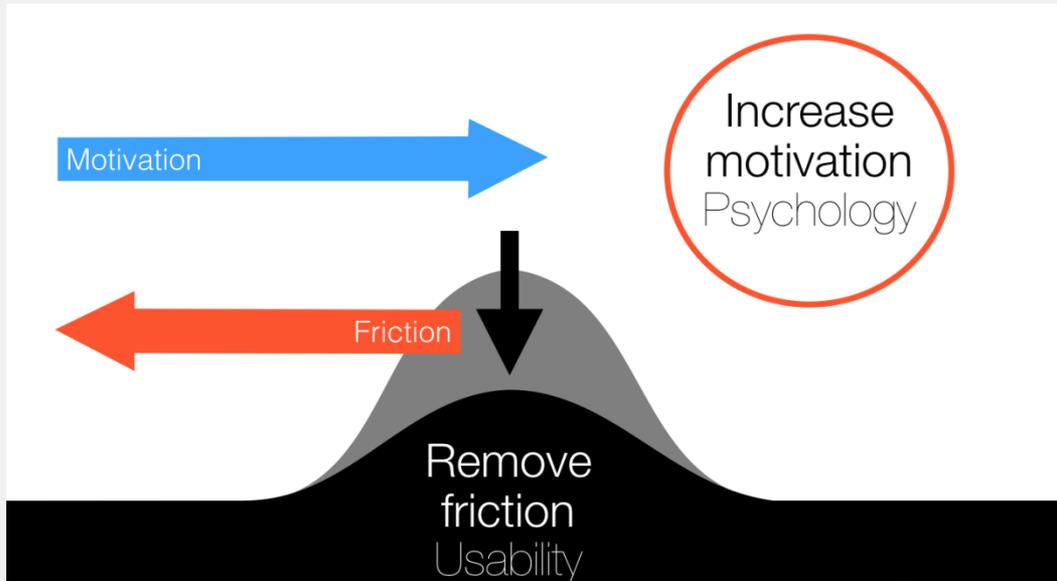
# Relatedness



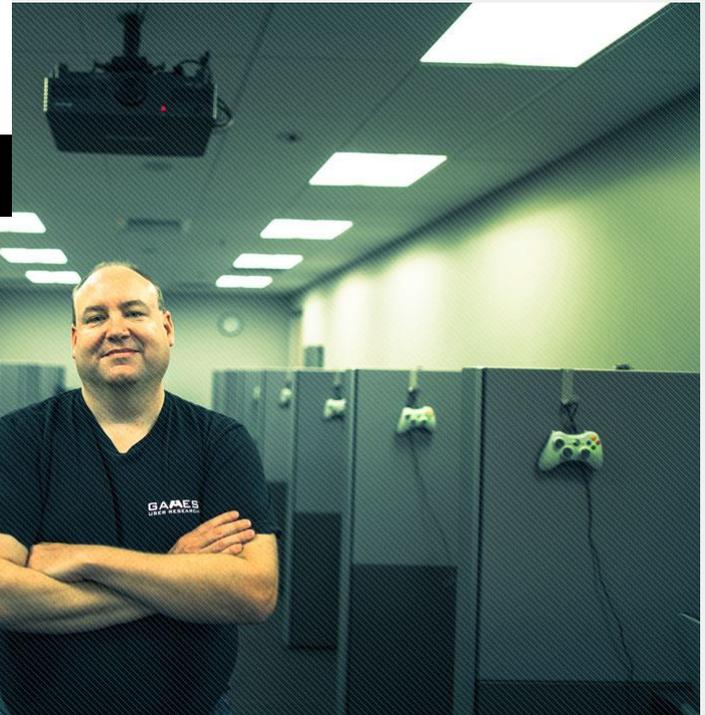
# Excessive Play Counterproductive (Wu '13 & Zhang '19)



# Persuasive Design



- Behavioral Game Design
- Research Labs
- Fixed & Variable Ratio Reinforcement



# Willpower vs Persuasive Design: **Not a Fair Fight**

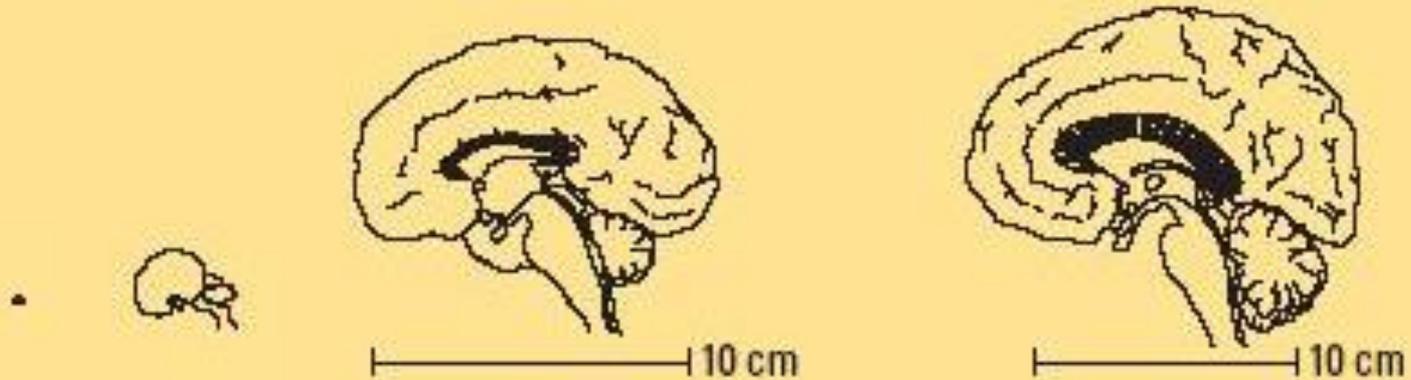


The Age/Fairfax Media/Getty Images

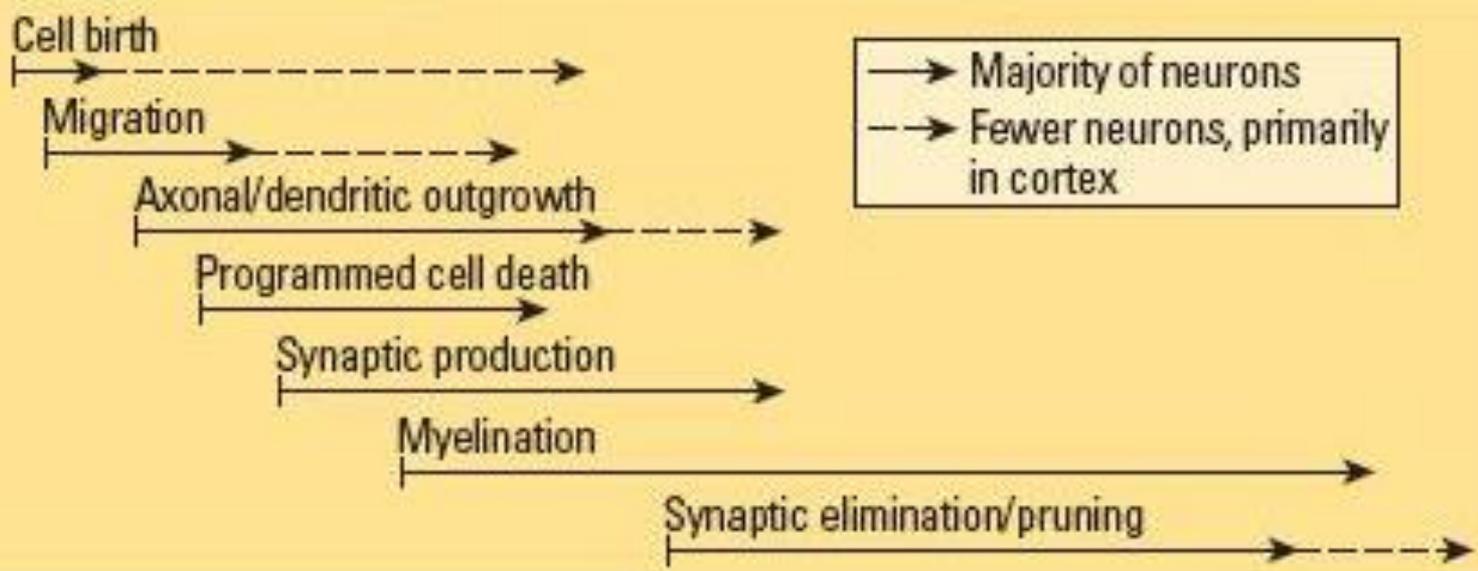
# Brains of Children & Teens



# Brain Development

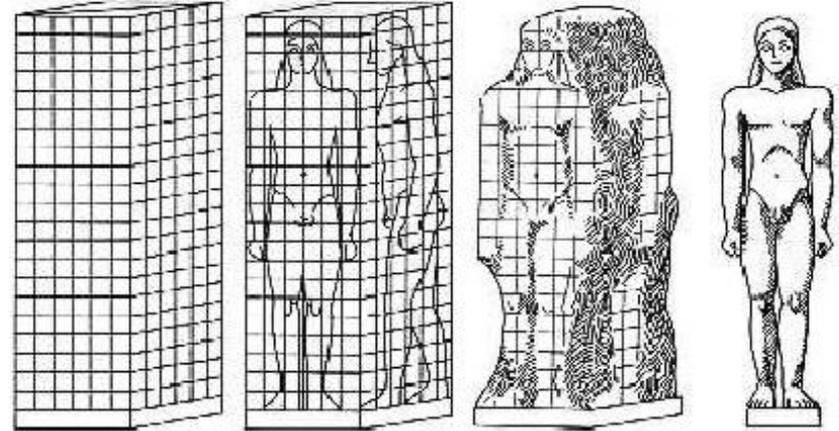


Prenatal							Postnatal												
Week: 0	6	12	18	24	30	36	Month: 0	6	12	18	24	30	36	Year: 4	8	12	16	20	24



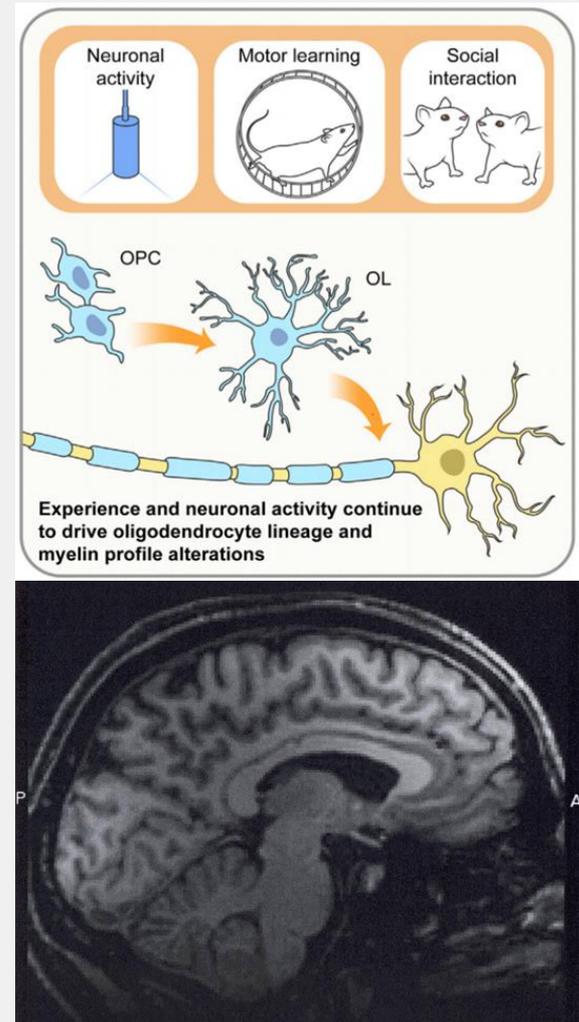
# Sculpting the Mature Brain

- Myelination & pruning variably in response to specific experiences
- Adult brain more refined & efficient
- Use it or lose it



# Screen Habits & CNS Changes

- NIH's ABCD study examined MRIs of 4,500 brains of children aged 9 & 10
- High screen exposure liked to deteriorations of regions corresponding to behavior control & increased aggression (*Paulus, '18*)
- Screens >7 hours/day: premature cortex thinning (*Dowling, '18*)



# Needs of Kids & Teens

- Sleep, diet & exercise
- Structure vs. autonomy
- Skills
- Family
- Social/identity



# How to Advise Parents?



# Healthy Teen Routines

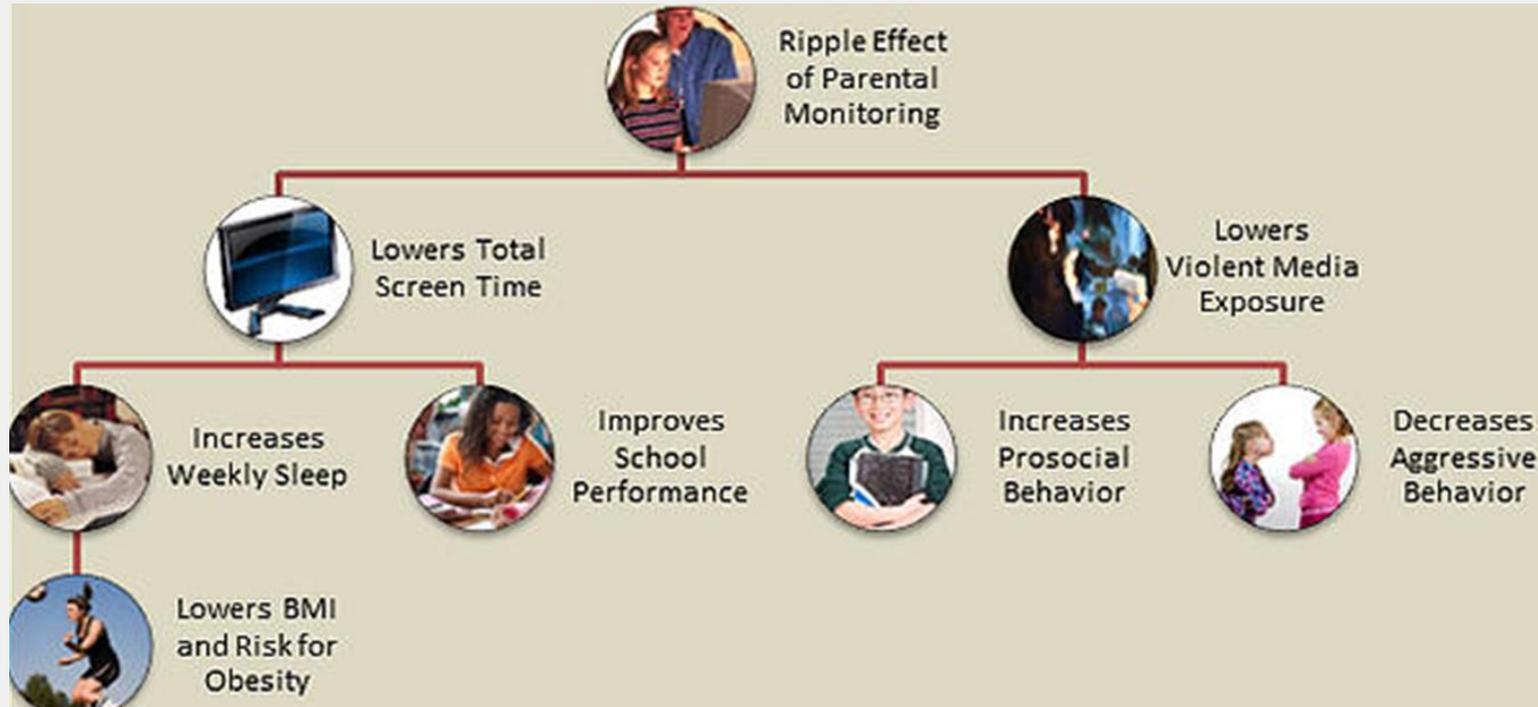
Enforce a schedule allowing sufficient time for

- Physical activity
- Meals & self-care
- Family/social
- Reading
- Chores
- Sleep



# Protective Effects of Parent Monitoring

- Decreasing total screen time improves sleep, school performance & BMI (*Tiberio '14 & Gentile '14*)
- Decreasing screen violence improves behavior (*Gentile '14*)

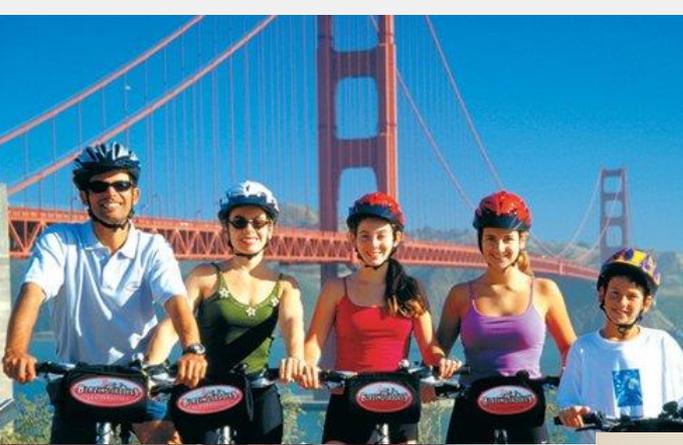


# Rules to Support Healthy Screen Habits

1. No screens in bedroom
2. Regular wake & sleep time
3. Limit screen time & content
4. Encourage educational, creative, social content
5. Role model



# Activities





Mom said  
Go play outside

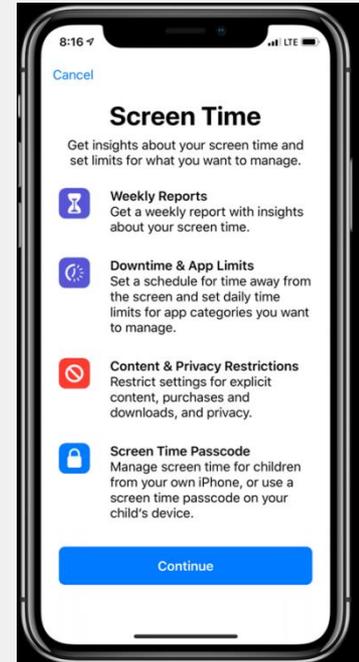
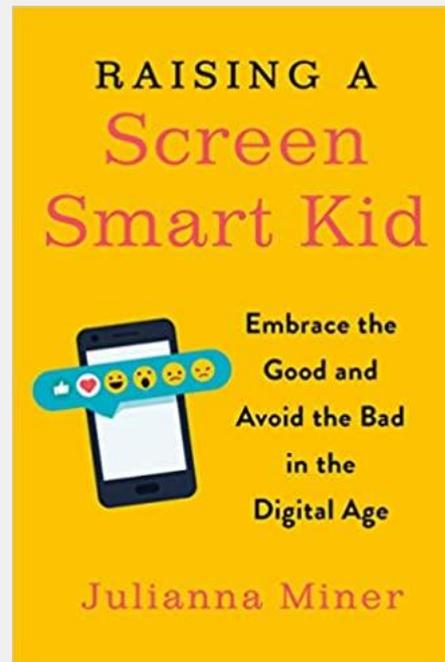
# Family Discussions

- Guide vs cop
- Play/watch together
- Open communication & critical thinking
- Be curious, not judgmental
- Collaborative rulemaking





- Books
- Built-in parental controls
- Parental control software?
- Router devices ?



# When to Refer?

- Parents cannot control child's habits
- Addictive habits
- Safety concerns
- A qualified mental health professional



# ACCESS-Mental Health CT

- **Hartford Hospital 855.561.7135**
- **Wheeler Clinic, Inc. 855.631.9835**
- **Yale Child Study Center 844.751.8955**

