

## **How Much Is Too Much?**

### *Best Practices in Navigating Media Use in American Indian and Alaska Native Youth*

**Jennifer Clay, LMFT, ATR-BC, Ph.D. Candidate**

SDSU Native American Resource Center

Cultural Consultant, Vista Hill Native American SmartCare Program

**Shawn Singh Sidhu, MD, DFAPA, DFAACAP**

Co-Director, Vista Hill Native American SmartCare Program

Child and Adolescent Psychiatrist, Southern Indian Health Council

**Mark Chenven, MD, DFAPA, DFAACAP**

Co-Director, Vista Hill Native American SmartCare Program



Please feel free to turn your video on and introduce yourself in the chat!

Let us know what you do and where you're based!

Also, we would love to hear any questions or comments throughout the presentation in the chatbox.

# Outline

- 1) Welcome Introduction and **Blessing** - Jennifer Clay (5 minutes, 12:00-12:05)
- 2) **Introduction** to the Native American SmartCare Program - Mark Chenven (5 minutes, 12:05-12:10)
- 3) Cognitive, Physiological, Social, and Emotional **Impacts of Extended Screen Time, Including Best Practices** - Shawn Singh Sidhu (20 minutes, 12:10-12:30)
- 4) **Navigating Media Use** in American Indian and Alaska Native Youth - Jennifer Clay (30 minutes, 12:30 - 1:00)
- 5) Summary and Q/A: All Speakers



Jennifer Clay, LMFT, ATR-BC, Ph.D. Candidate

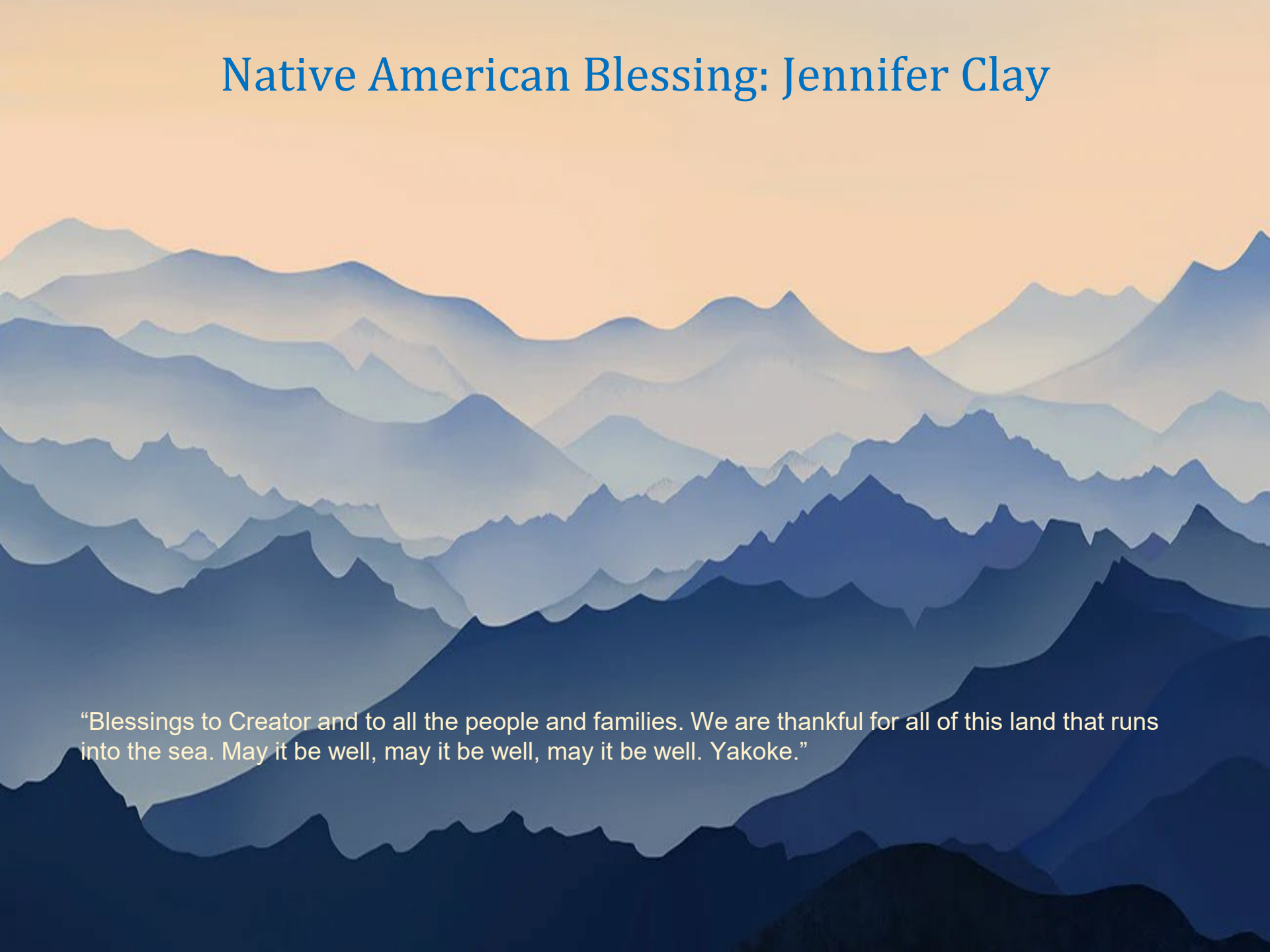


Jennifer is the daughter of a boarding school survivor and both sides of her family are rooted in the red earth of Oklahoma. She is a member of the Choctaw Nation of Oklahoma and has worked as a licensed Marriage & Family Therapist and Board Certified Art Therapist for over fifteen years. Jennifer is a PhD candidate in clinical art therapy and currently works as Assistant Director at San Diego State University's Native Resource Center. She firmly believes that art expression is a social window and an effective change agent in community healing and societal change. At the core of her work between art and dialogue, Jennifer believes that addressing social justice issues through art expression is most



impactful when the artists and viewers are

# Native American Blessing: Jennifer Clay



“Blessings to Creator and to all the people and families. We are thankful for all of this land that runs into the sea. May it be well, may it be well, may it be well. Yakoke.”

We hold a deep and profound respect for the original inhabitants of this land. Our homes and places of work rest on the unceded territory of the **Kumeyaay Nation**. We thank them deeply for their stewardship of this land, and for their wisdom, guidance, mentorship, insightfulness, and support.



May we continue to seek education from the original inhabitants of this land, such that we gain a critical awareness the historical, modern day, and potential future impacts of colonization trauma

**A Nation Separated: July 23rd, 2020. Kumeyaay Border Protest @ U.S. - Mexico Border. To this day the Kumeyaay Nation remains separated based on artificial borders imposed by colonizers and those of us who remain silent bystanders.**



# Shawn Singh Sidhu, MD, DFAPA, DFAACAP

Shawn Singh Sidhu an Associate Professor of Psychiatry at the University of California San Diego (UCSD) where he serves as Training Director for the Child and Adolescent Psychiatry Fellowship Program. Along with supporting asylum-seeking migrant youth and families at the border, Dr. Sidhu's greatest honor has been to serve American Indian and Alaska Native families over the past 10 years. Dr. Sidhu served rural tribal health centers in three different states in his role as Associate Medical Director for the Indian Health Services - University of New Mexico Telebehavioral Health Center of Excellence Program. He now serves as Co-Director for the Vista Hill Native American SmartCare Program, a collaboration between California Area Indian Health Services and Vista Hill Foundation, a 60 year-old non-profit community mental health agency based in San Diego.

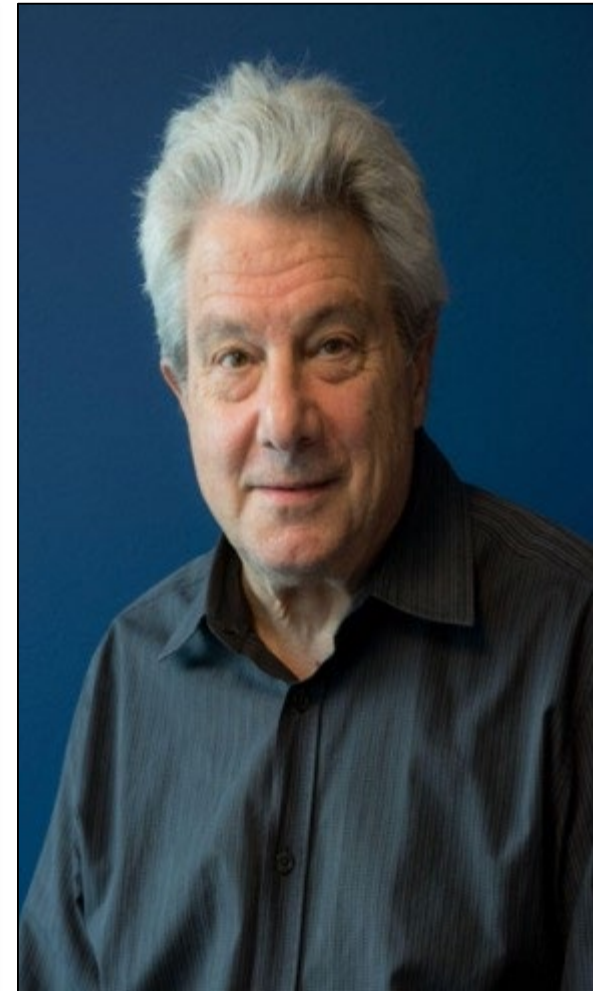




## Mark Chenven, MD, DFAPA, DFAACAP

Mark Chenven is an Adjunct Clinical Professor of Psychiatry at the University of California San Diego (UCSD). Dr. Chenven has spent his entire career working with underserved youth and families. After directing programs for the County of San Diego Medi-Cal populations for 20 years, Dr. Chenven transitioned to the role of Executive Medical Director for Vista Hill Foundation.

He currently serves as Co-Director for the Vista Hill Native American SmartCare Program. At a national level, Dr. Chenven developed the first Practice Parameter on Community-Based Systems of Care for the American Academy of Child and Adolescent Psychiatry, and he has served on multiple influential committees for both the American Academy of Child and Adolescent Psychiatry and the American Psychiatric Association aimed at improving access and reducing health disparities.



## Disclosures:

Jennifer Clay does not have any financial conflicts of interest or disclosures

Shawn Singh Sidhu does not have any financial conflicts of interest or disclosures

Mark Chenven does not have any financial conflicts of interest or disclosures

## Learning Objectives/Outcomes:

Upon completion of this activity, participants will be able to:

1. Identify cognitive, psychological, social, emotional, and other **impacts of excessive screen time** in AI/AN youth and families
2. **Apply current guidelines** from the American Academy of Pediatrics (AAP) and the American Academy of Child and Adolescent Psychiatry (AACAP) to conduct an effective media history when working with AI/AN youth
3. **Provide families with effective tools** to set media priorities for their children

# Introduction to the Native American SmartCare Program: Mark Chenven





**Child  
and  
Family  
Centered**

**Urban  
and  
Rural**



**Integrated  
and  
Collaborative  
Access to  
Behavioral  
Healthcare  
Expertise**





**240 Contact Hours**  
with primary and  
behavioral healthcare  
providers and families  
thus far!



**75% of Clients** are  
American Indian/  
Alaska Natives





**ALL** of our  
services are  
**100% free**  
for Tribal  
Healthcare  
Sites!!!

**IHS-Funded  
Trauma-Informed  
Culturally-Sensitive**

### **What We Offer:**

- 1) Live Telehealth Treatment Team Consultation (we join your treatment teams!)
- 2) Scheduled Patient Consultations (we send you an iPad, interview the patient in your clinic virtually, and produce a consultation report with recommendations for you)
- 3) Monday - Friday, 8 a.m. to 5 p.m. Telephonic Provider Warmline for Provider to Provider Consults: **888-987-0960**
- 4) Monday - Friday, 8 a.m. to 5 p.m. Telephonic Family/Parent Line for Family/Parent Mental Health Questions: **888-660-6616**
- 5) In-Service Behavioral Health Education and Training for Staff
- 6) Weekly Behavioral Health Newsletters with treatment recommendations
- 7) Linkage to resources

### **Contact Information:**

Call us with questions at **760-427-6427**

[NativeAmericanSmartCare@VistaHill.org](mailto:NativeAmericanSmartCare@VistaHill.org)

# Native American SmartCare Program

## Active Sites:

Sonoma County Indian Health Project

Shingle Springs Tribal Health and Wellness Center

Toiyabe Indian Health Project

## Potential/Likely Upcoming Sites:

Native American Health Center (Bay Area)

Round Valley Indian Health Center

Central Valley Indian Health





# Native American SmartCare Program

## Collaborators:

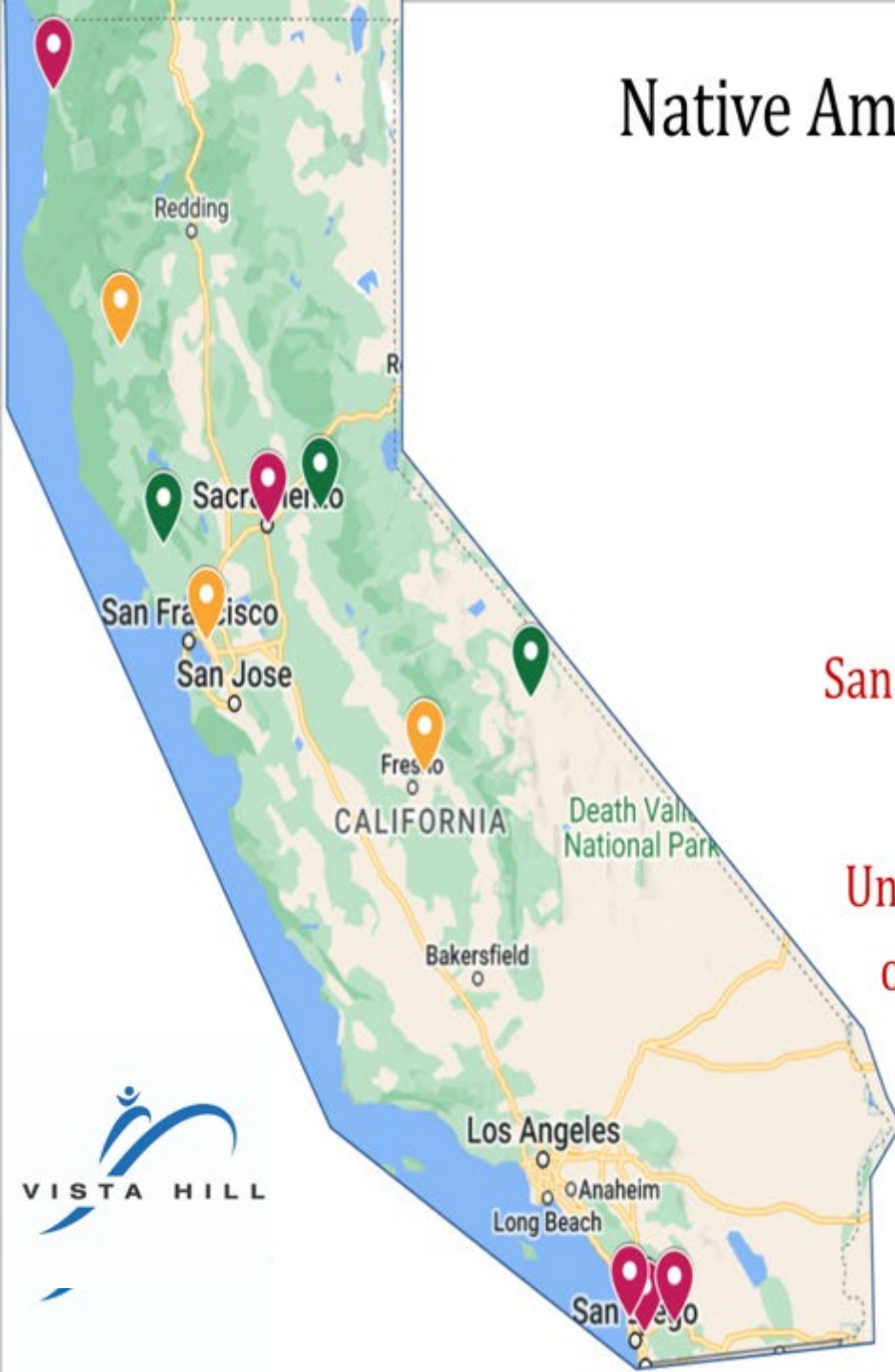
California Area Indian Health Services

Southern Indian Health Council

San Diego State University (SDSU) Native Resource  
Center

University of California San Diego (UCSD) School  
of Medicine Transforming Indigenous Doctor  
Education Program (TIDE)

Yurok Health and Human Services



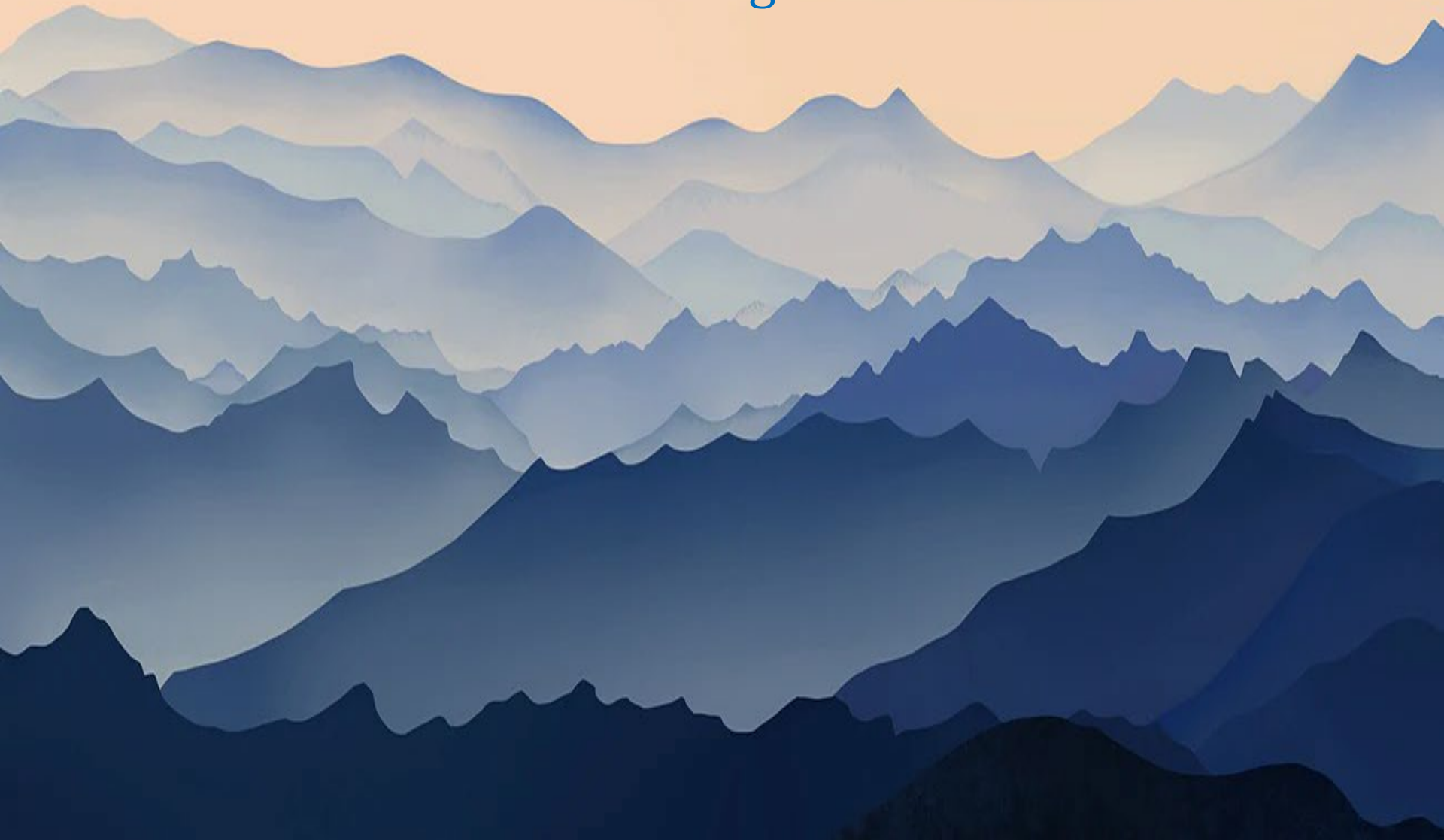
# Native American SmartCare Program

## Tribal Groups Served and Tribal Collaborations:

Cloverdale Rancheria of Pomo Indians of California, Dry Creek Rancheria Band of Pomo Indians, Federated Indians of Graton Rancheria, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Lytton Rancheria of California, Manchester Band of Pomo Indians of the Manchester Rancheria, Shingle Springs Band of Miwok Indians, Antelope Valley Indian Community, Big Pine Paiute Tribe of the Owens Valley, Bishop Paiute Tribe, Bridgeport Indian Reservation, Lone Pine Paiute-Shoshone Reservation, Utu Utu Gwaitu Tribe, Timbisha Shoshone Tribe, Barona Band of Mission Indians, Campo Band of Kumeyaay Indians, Ewiiapaayp Band of Kumeyaay Indians, Jamul Indian Village, La Posta Band of Mission Indians, Manzanita Band of the Kumeyaay Nation, Viejas Band of Kumeyaay Indians, and the Yurok Tribe.



# Impact of Extended Screen Time on Child and Adolescent Populations (Non-Natives): Shawn Singh Sidhu



REVIEW ARTICLE | VOLUME 27, ISSUE 2, P203-219, APRIL 01, 2018

# Electronic Screen Media Use in Youth With Autism Spectrum Disorder



[McLeod Frampton Gwynette, MD](#)   • [Shawn S. Sidhu, MD](#) • [Tolga Atilla Ceranoglu, MD](#)

DOI: <https://doi.org/10.1016/j.chc.2017.11.013> •  Check for updates



TRANSLATIONS | VOLUME 56, ISSUE 1, P3-4, JANUARY 01, 2017

# Name No Names: The Role of the Media in Reporting Mass Shootings

[Shawn Singh Sidhu, MD, FAPA](#)  

DOI: <https://doi.org/10.1016/j.jaac.2016.10.004> •  Check for updates



# BMJ Open Effects of screentime on the health and well-being of children and adolescents: a systematic review of reviews

Neza Stiglic, Russell M Viner

**To cite:** Stiglic N, Viner RM. Effects of screentime on the health and well-being of children and adolescents: a systematic review of reviews. *BMJ Open* 2019;**9**:e023191. doi:10.1136/bmjopen-2018-023191

► Prepublication history for this paper is available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2018-023191>).

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Accepted 26 November 2018

## ABSTRACT

**Objectives** To systematically examine the evidence of harms and benefits relating to time spent on screens for children and young people's (CYP) health and well-being, to inform policy.

**Methods** Systematic review of reviews undertaken to answer the question 'What is the evidence for health and well-being effects of screentime in children and adolescents (CYP)?' Electronic databases were searched for systematic reviews in February 2018. Eligible reviews reported associations between time on screens (screentime; any type) and any health/well-being outcome in CYP. Quality of reviews was assessed and strength of evidence across reviews evaluated.

**Results** 13 reviews were identified (1 high quality, 9 medium and 3 low quality). 6 addressed body composition; 3 diet/energy intake; 7 mental health; 4 cardiovascular risk; 4 for fitness; 3 for sleep; 1 pain; 1 asthma. We

## Strengths and limitations of this study

- Undertook a systematic review of reviews in multiple electronic databases using a prespecified methodology.
- Included only studies that directly reported screentime separately from other sedentary behaviours.
- Used assessment of review quality and weight of supportive evidence to assign strength of evidence to findings.
- Quality of included reviews was predominantly moderate or low, dominated by studies of television screentime, with screentime largely self-reported.
- Data on mobile screen use was extremely limited and our review did not address the content or context of screen viewing.

# Relevant Publications

Gwynette FM, **Sidhu S**, Ceranoglu TA. “Electronic Screen Media Use in Youth with Autism Spectrum Disorders.” *Child and Adolescent Psychiatric Clinics of North America*. Status: in press.

**Sidhu S**. “Name No Names: The Role of the Media in Reporting Mass Shootings.” *Journal of the American Academy of Child and Adolescent Psychiatry*. 2017 Jan; 56(1):3-4. PMID: 27993225.

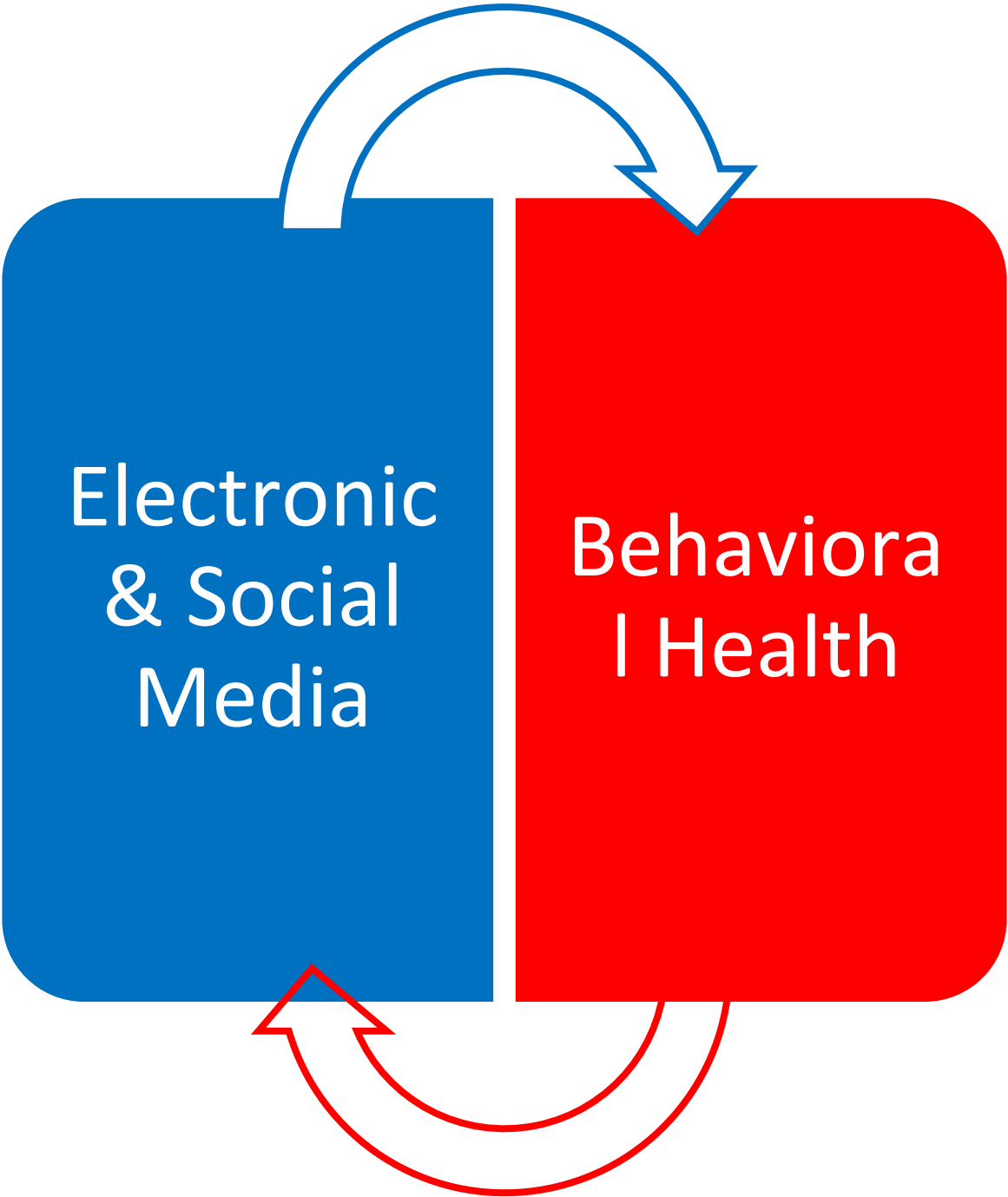
**Sidhu S**. “The Yin and Yang of Social Media Use in Our Patients.” *AACAP News*. 2015 Nov/Dec;46(6):261-2.

**Sidhu S**. “Doctor, When Should My Child Be Allowed to Start Using Social Media?” *AACAP News*. 2015 Jul/Aug;46(4):169-170.

**Sidhu S**, Gwynette MF, Veenstra-VanderWeele JM. “46.0 Will You Friend Me? Understanding the Complex Interplay Between Social Media, Online Gaming, and Technology in Autism Spectrum Disorder.” *Journal of the American Academy of Child and Adolescent Psychiatry*. 2016 Oct;55(10) Supplement: S70.

# Limitations in Data

Correlation  $\neq$  Causation





# Potential Benefits of Screen Time:

- Increased connection with friends and family
- Academic performance
  - (Khan Academy, i-Ready)
- Advocacy and community involvement
- Moral support for minorities
- Free access to information
- Opportunities and networking



# Potential Benefits of Screen Time:

Screens may be displacing risky behaviors in teens

## ➤ Decreased Risky Behaviors

- Teen Pregnancy Rate: 1990s → 2012 decreased over 100%
- Teen Drug Use: 2000 → 2016 alcohol and nicotine decreased 50%(more marijuana)
- Teen Violent Crime: 1990s → 2015, 50%decrease
- Teen Motor Vehicle Accidents: 2000 →2014 50%decrease

# Potential Drawbacks of Screen Time:

BUT..screens may be displacing healthy behaviors in teens too

## ➤ Decreased Healthy Behaviors

- Physical Activity: 2000→2016 obesity rate increased 33%
- Socializing In Real Life: 2000→2015 decreased 20%
- Reading: 2000→2016, %daily teen readers decreased from 60%to 15%
- Sleep: 2000 →2015, %teens with < 7 hrs sleep per night increased from 26%to 40%

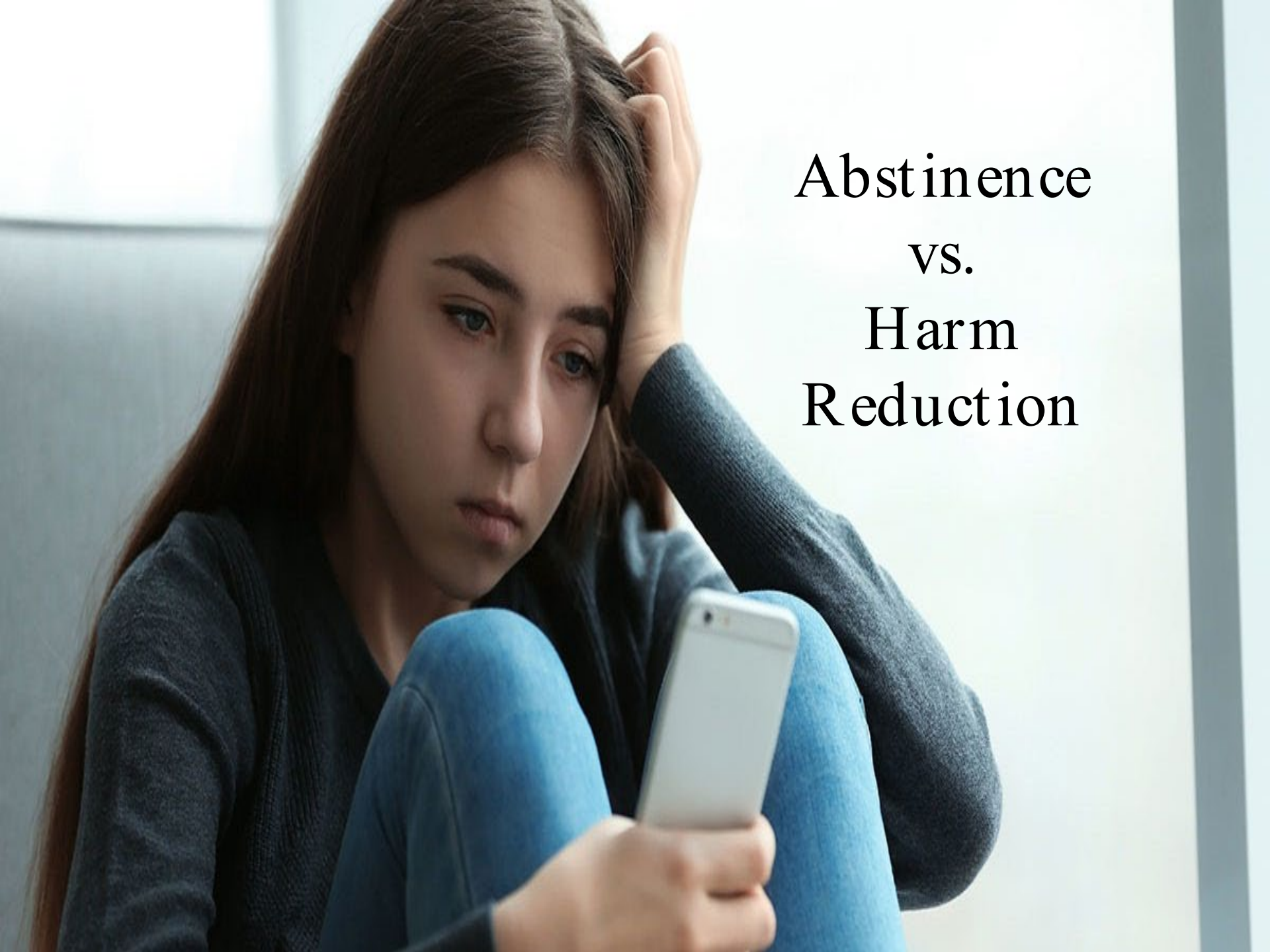


# Potential Drawbacks of Screen Time:

➤ BUT... in the past 20 or so years  
we've seen

- Increased Teen Depression
- Increased Teen Anxiety
- Increased Teen Self-Injurious Behavior
- Increased Teen Deaths by Suicide





Abstinence  
vs.  
Harm  
Reduction

# Duration of Use

Children (American Academy of Pediatrics Media Toolkit)

- The average 8 year-old spends 8 hours a day using various forms of media

- Teenagers 13-17 years of age send an average of 3,364 text messages per month

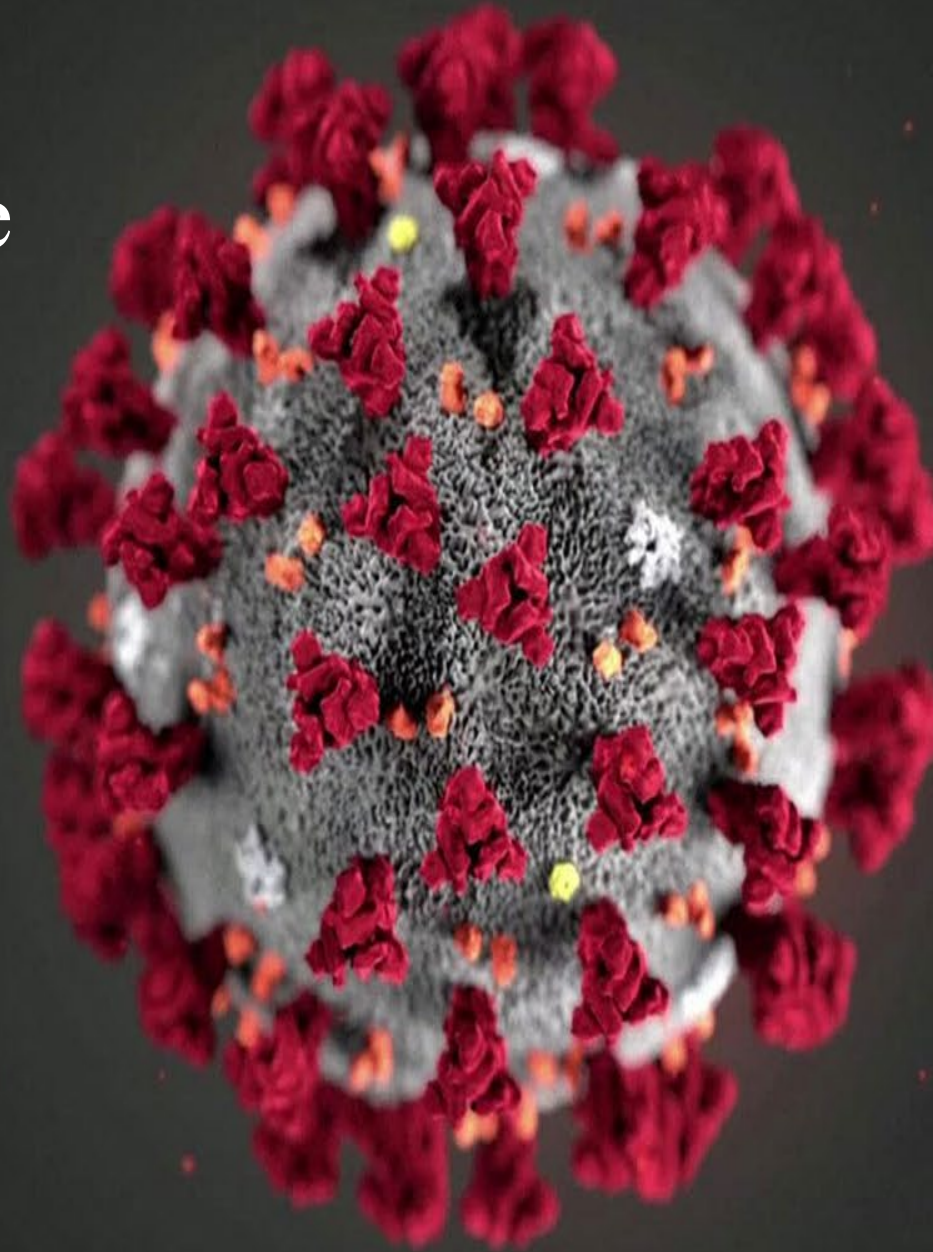
Teens (American Heart Association):

- 60% average 2.9 hours per day (20 hrs/wk)

- 33% average 5.7 hours per day (40 hrs/wk)

- 7% greater than 7.1 hours per day (50 hrs/wk)

# COVID-19 and Screen Time



# Sociodemographic Predictors of Changes in Physical Activity, Screen Time, and Sleep Among Toddlers and Preschoolers in Chile during the COVID-19 Pandemic

- 3157 participants
- Mean age 3.1 years
- **Overall decreased time spent in physical activity**
- **Overall increase in recreational screen time**
- **Sleep duration increased, but sleep quality decreased**
- Toddlers and pre-schoolers living in a rural area with space to play attenuated impact
- Older children living in urban areas with higher-educated caregivers aged 35-45: greater changes



# Health Disparities

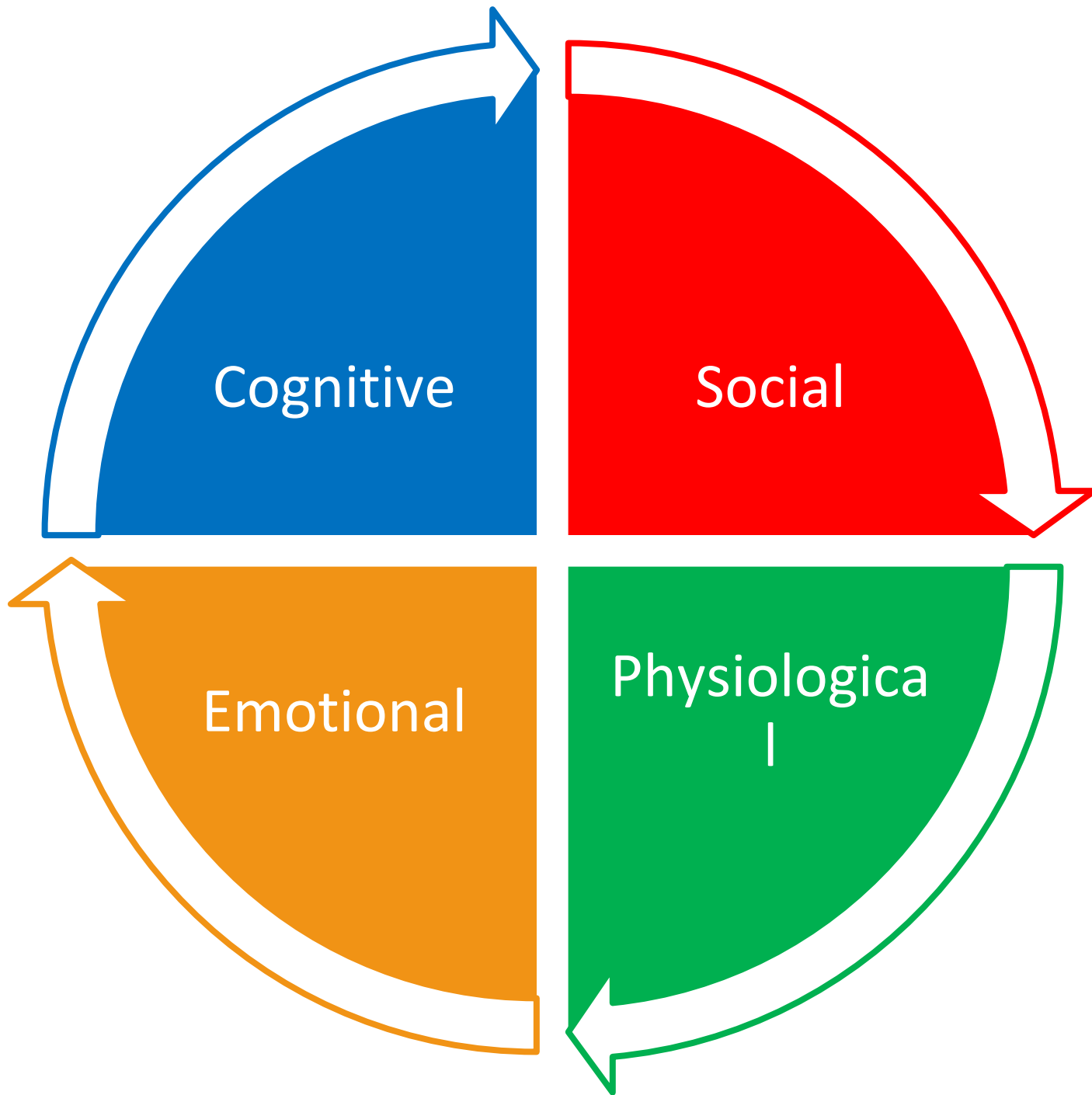


# Weight-Related Behaviors of Children with Obesity During the COVID-19 Pandemic (Duke University)

- 51 parents given semi-structured interviews
- Mean age 9.7
- African American (46%), Hispanic (39%)
- Low Income (62%)
- **Increase in leisure-based screen time, corresponding to sleeping later and waking up later**
- Increased snacking and more meals consumed
- Some kids had less physical activity with loss of structure, while others had more

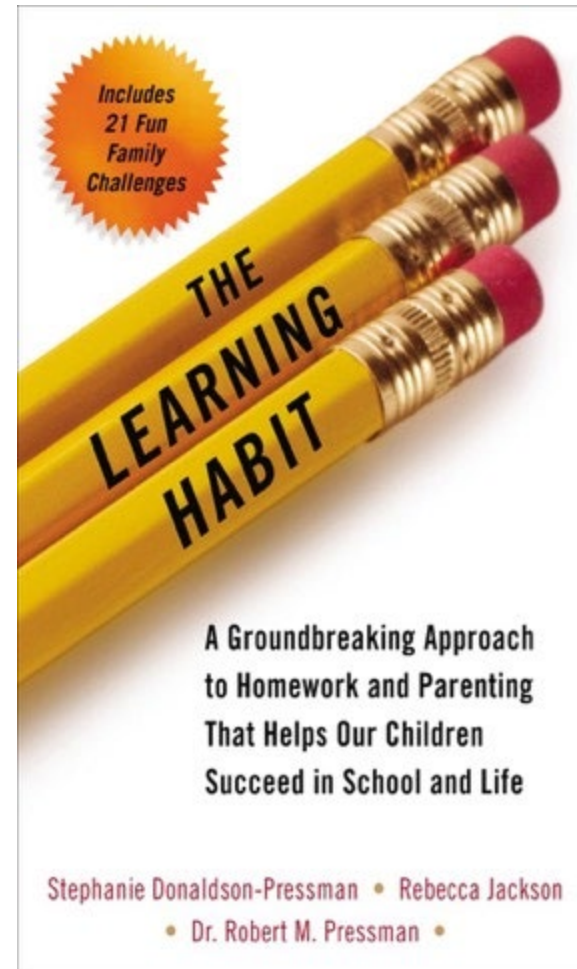
# Income, Race and its Association with Obesogenic Behaviors of U.S. Children and Adolescents, NHANES 2003-2006

- 3551 children and adolescents
- Mean age 13.1 years
- Demographics: 37% Hispanic, 27% White, 35% African American
- **Increase screen time associated with low-income households** as compared to medium or high-income households
- **Race/Ethnicity by Income Interactions** for Hispanic and African American Youth with Screen Time



# What Are the Negative Effects of Increased Screen Time?

Pressman RM,  
Owens JA, Evans  
AS, et al.  
“Examining the  
Interface of Family  
and Personal  
Traits, Media, and  
Academic  
Imperatives Using  
the Learning Habit  
Study.” *The  
American Journal  
of Family Therapy*.  
2014 Oct.  
42(5):347-363.



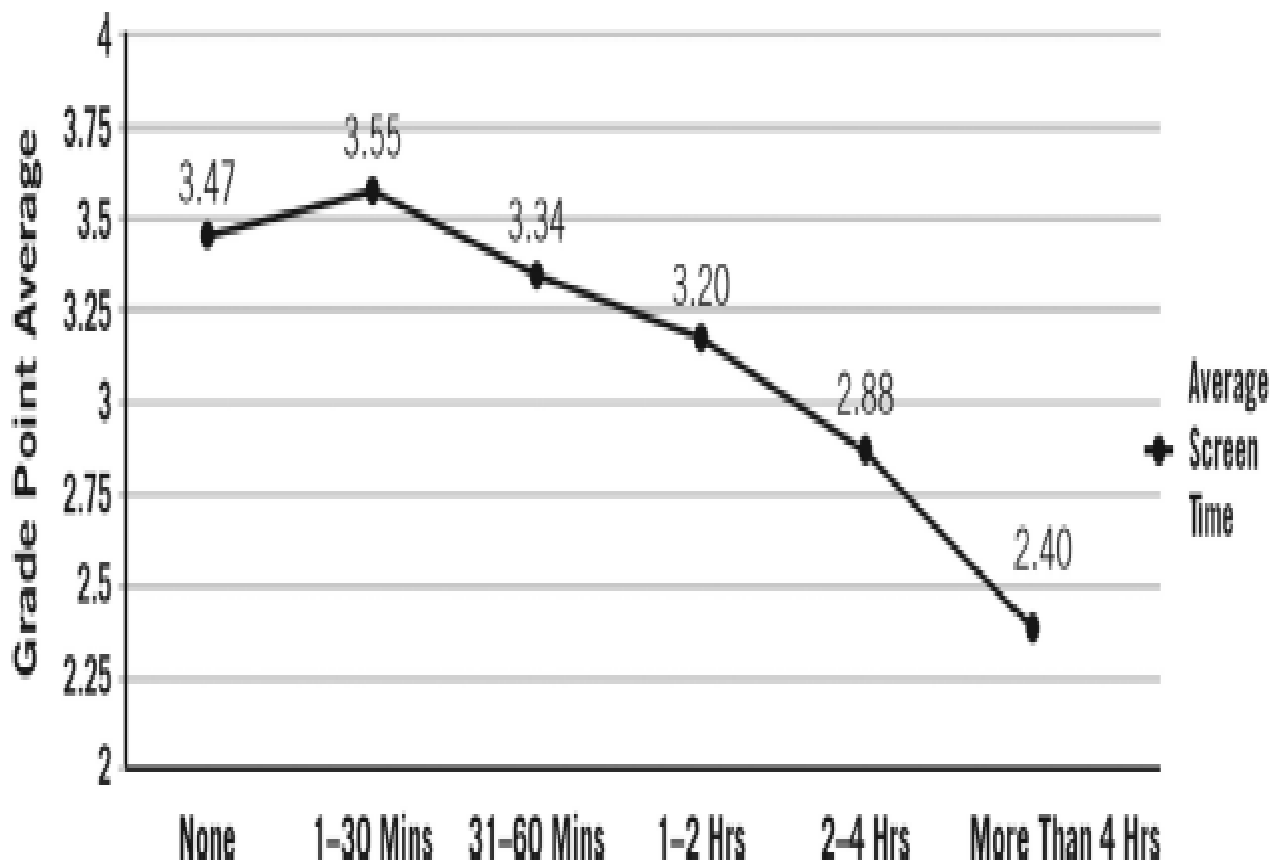
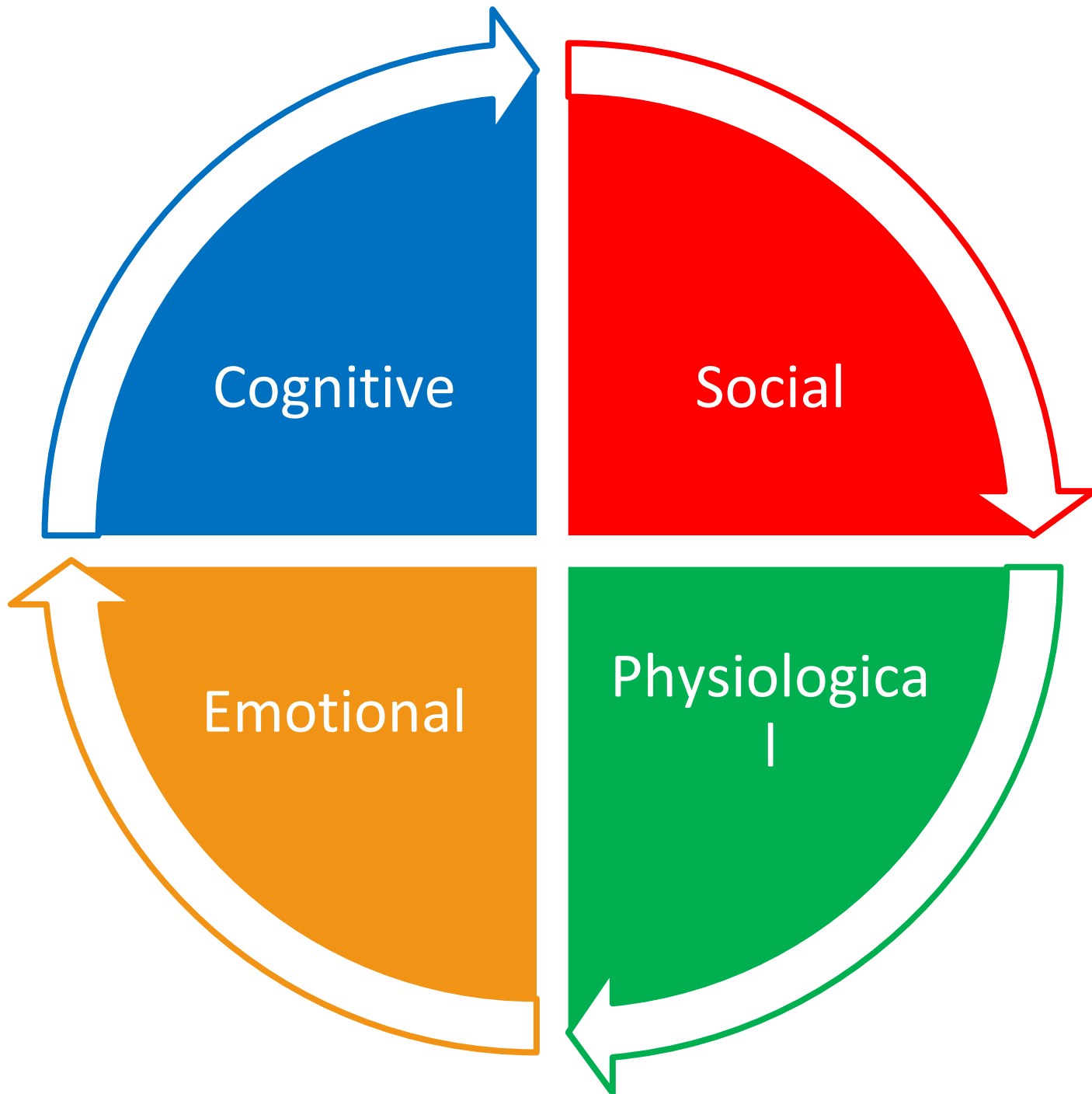


FIGURE 1 Grade point averages by screen time per day for children in secondary school.



# Correlations Between Extended Screen Time and General Pediatric Health

↑ screen time → ↓ activity → ↑ obesity (DM, sleep apnea)

Heavy media use in preschool children is significantly correlated with increases in **BMI** (Cox 2012).

A study of 2 year olds found that **BMI** increases for every hour of media consumed throughout the week (Wen 2014).

\*Preliminary studies are being conducted using smartphone technology to fight obesity and increase fitness (Lubans 2016), but much more evidence to the contrary, and lose social benefit of in-person activities



**2 hours** of tablet exposure prior to bed resulted in significantly **decreased melatonin levels** in teens and young adults (Wood 2013); however, a significant confound for stimulation effect in phones

# Poor Sleep Correlated To...

Obesity (Li 2017)

Early Onset Type-2 DM (Gurnani 2015)

Cardiopulmonary Disease (Gurnani 2015)

Difficulty Performing on Cognitive Tests (Sadeh 2002)

- Continuous Performance Test

- Symbol-Digit Substitution Test

Behavioral Problems (Sadeh 2002)

“Psychiatric Symptoms” and Externalizing Symptoms (Sadeh 2002)

Social Problems (Velten-Schurian 2010)

Self-Harm Behaviors (Singareddy 2013)

In Adolescents: decline in psychosocial health, school performance, and an increase in risk-taking behaviors including nicotine and marijuana use (Schochat 2014)

# Extremely Extended Media Time: Internet Gaming Disorder

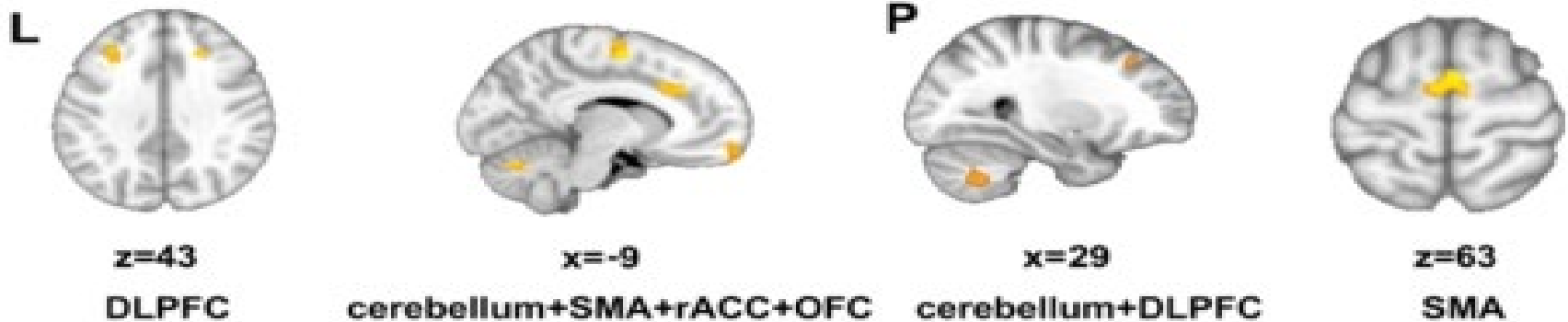
Internet Addiction (DSM-V “Conditions for Further  
Study”)

Compulsive-impulsive and excessive internet ***use to the point of serious impairment in functioning, associated with loss of sense of time and/or neglecting basic drives***

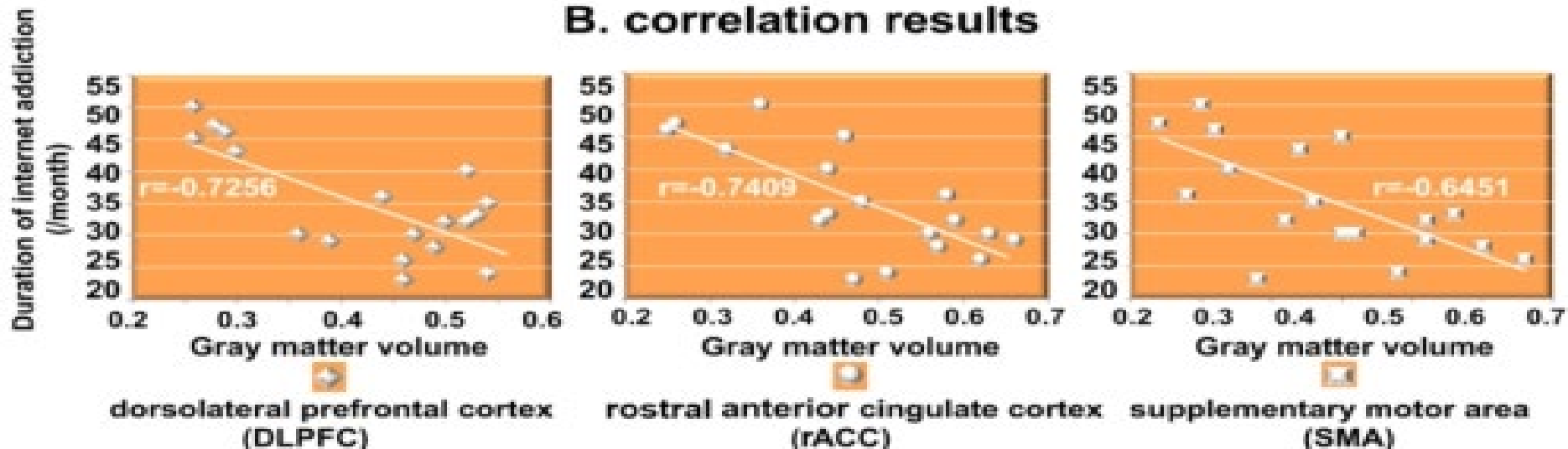
As in other addictions, includes withdrawal/tolerance and negative impact in multiple domains

# Decreased Gray Matter in Internet Addiction (Yuan 2013)

## A. VBM results (CON > IAD)



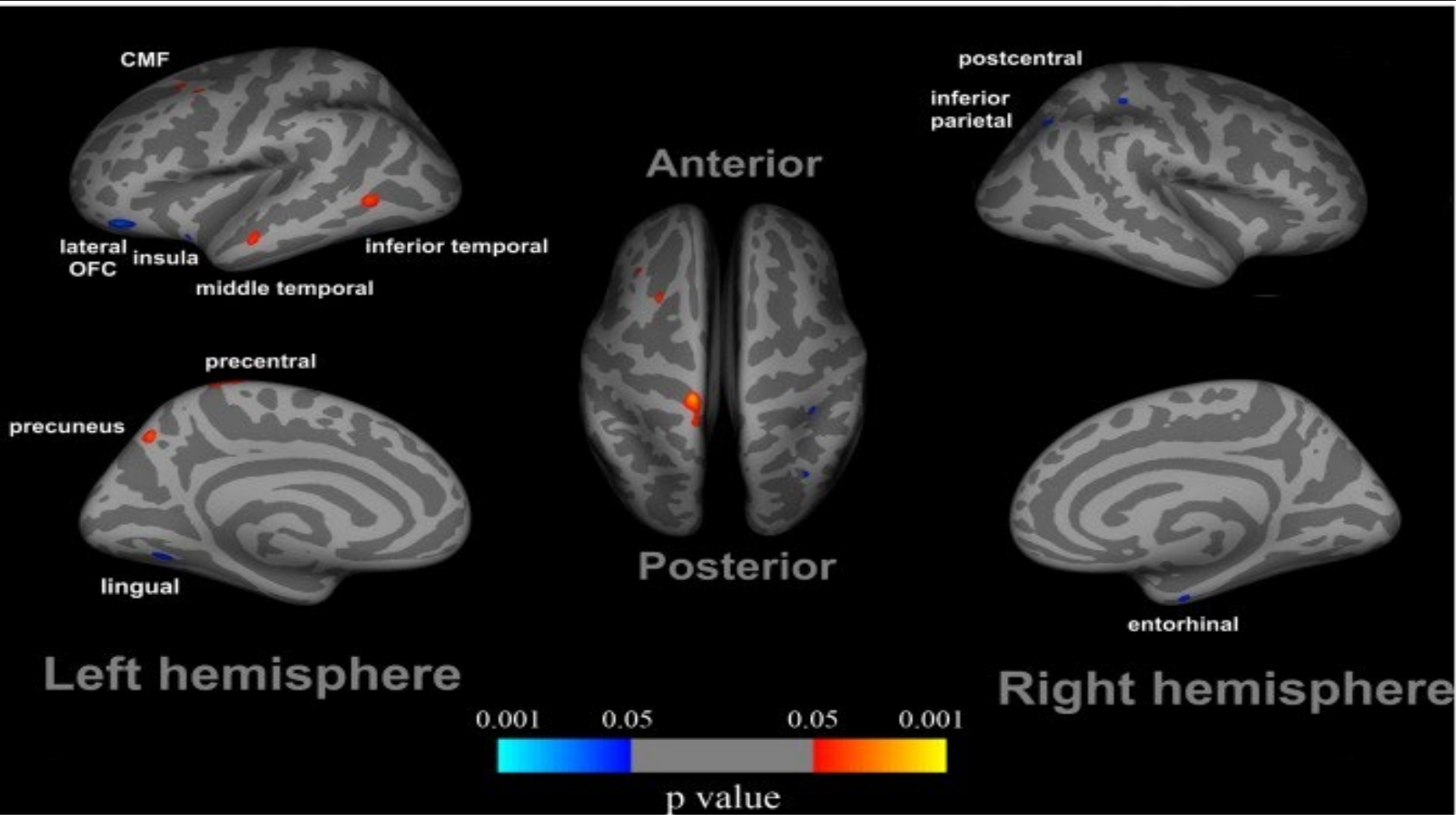
## B. correlation results



# Decreased Gray Matter in Internet Addiction

- Orbitofrontal Cortex (Weng 2013, Yuan 2011)
- Bilateral Dorsolateral Prefrontal Cortex (Yuan 2011)
- Left Insula (Zhou 2011)
- Supplementary Motor Area (Weng 2013, Yuan 2011)
- Left Lingual Gyrus (Zhou 2011)
- Cerebellum (Yuan 2011)
- Left Anterior/Posterior Cingulate Cortex (Yuan 2011, Zhou 2011)

# Changes in Cortical Thickness in Internet Addiction (Yuan 2013)

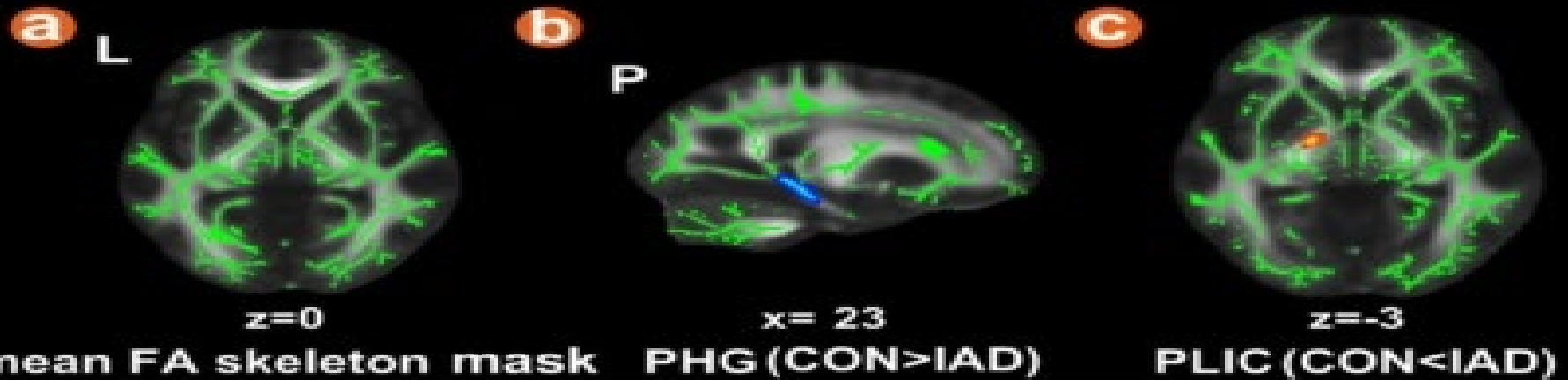


# Changes in Cortical Thickness in Internet Addiction

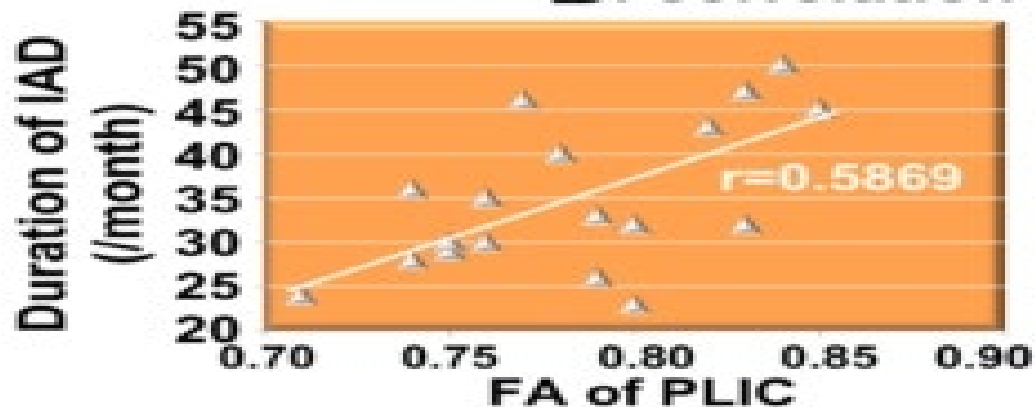
- ↓ in Left Lateral Orbitofrontal Cortex (Weng 2013)
- ↓ in Right Lateral Orbitofrontal Cortex (Hong 2013)
- ↓ in Insula (Yuan 2013)
- ↓ in Lingual Gyrus (Yuan 2013)
- ↓ in Right Post-Central Gyrus (Yuan 2013)
- ↓ in Entorhinal Cortex (Yuan 2013)
- ↓ in Inferior Parietal Cortex (Yuan 2013)
- ↑ in Left Precentral Cortex (Yuan 2013)
- ↑ in Precuneus (Yuan 2013)
- ↑ in Middle Frontal Cortex (Yuan 2013)
- ↑ in Inferior/Middle Temporal Cortex (Yuan 2013)

# White Matter Changes on DTI in Internet Addiction (Yuan 2011)

## A. DTI FA comparison



## B. correlation results



PHG:  
parahippocampal gyrus

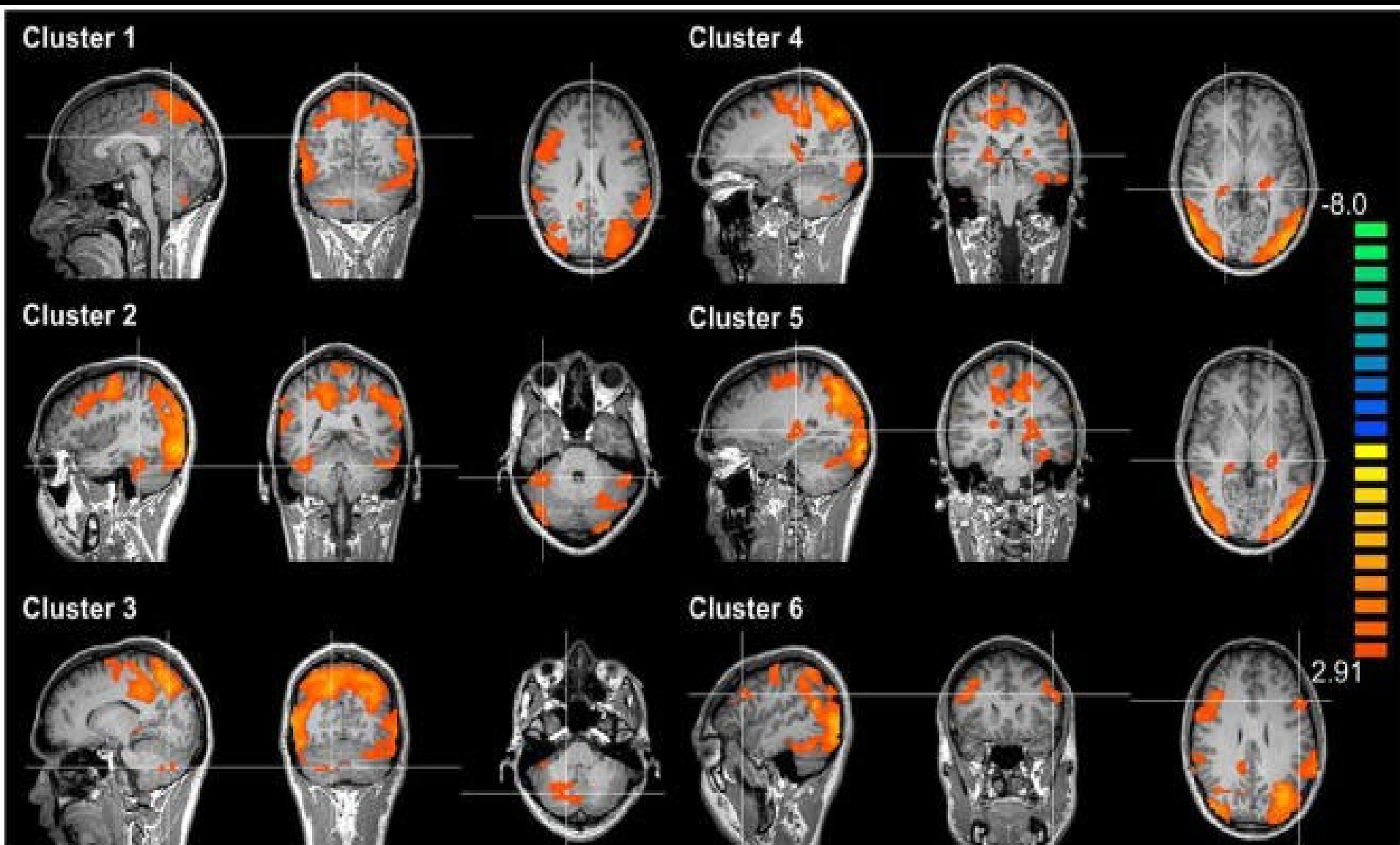
PLIC:  
posterior limb of  
the internal capsule



# White Matter Changes (Fractional Anisotropy) in Internet Addiction

- ↓ in Orbitofrontal White Matter (Lin 2012)
- ↓ in Inferior Fronto-Occipital Fasciculus (Lin 2012)
- ↓ in Cingulum (Lin 2012)
- ↓ in Right Genu of Corpus Callosum (Weng 2013)
- ↓ in Left Genu of Corpus Callosum (Lin 2012)
- ↓ in Corona Radiata (Lin 2012)
- ↓ in Right External Capsule (Weng 2013)
- ↓ in Bilateral Frontal Lobe (Weng 2013)
- ↓ in Internal and External Capsules (Lin 2012)
- ↓ in Inferior Parietal Cortex (Yuan 2011)
- ↑ in Left Posterior Limb of Internal Capsule (Yuan 2011)

# fMRI Findings in Internet Addiction (Han 2011)



# Increased Activation on fMRI in Internet Addiction

\*Tasks performed while engaging in media content

Right Orbitofrontal Cortex (Ko 2009)

Right Dorsolateral PFC (Ko 2009)

Left Inferior Frontal Gyrus (Han 2011)

Right Medial Frontal Lobe (Han 2011)

Bilateral Medial Frontal Cortex (Ko 2009)

Bilateral Anterior Cingulate Cortex (Ko 2009)

Right/Left Frontal Precentral Gyrus (Han 2011)

Left Parietal Precuneus Gyrus (Han 2011)

Left/Right Parahippocampal Gyrus (Han 2011)

Right Parietal Post-Central Gyrus (Han 2011)

Left/Right Thalamus (Han 2011)

Right Nucleus Accumbens (Ko 2009)

Right Caudate Nucleus (Ko 2009)

# Increased Fluctuation on fMRI in Internet Addiction

\*ALFF = Amplitude of Low Frequency Fluctuations at rest.  
Tasks performed while engaging in media content

Left Medial Orbitofrontal Cortex (Yuan 2013)

Left Precuneus (Yuan 2013)

Left Supplementary Motor Area (Yuan 2013)

Right Parahippocampal Gyrus (Yuan 2013)

Bilateral Middle Cingulate Cortex (Yuan 2013)

# TRYING THE STROOP EFFECT YOURSELF

blue orange green red purple

red purple blue orange green

green red purple blue orange

red blue green orange purple

# Impairment in Task Performance in Internet Addiction

## Deliberation Time:

↑ Left Striatal Gray Matter (Kuhn 2011, correlated with **longer deliberation time** on tasks)

## Stroop Performance:

-↑ fluctuation in Left Medial Orbitofrontal Cortex correlated with Stroop Performance (Yuan 2013)

-**Impaired Stroop task performance** correlated to ↓ **Cortical Thickness of OFC (Yuan 2013)**

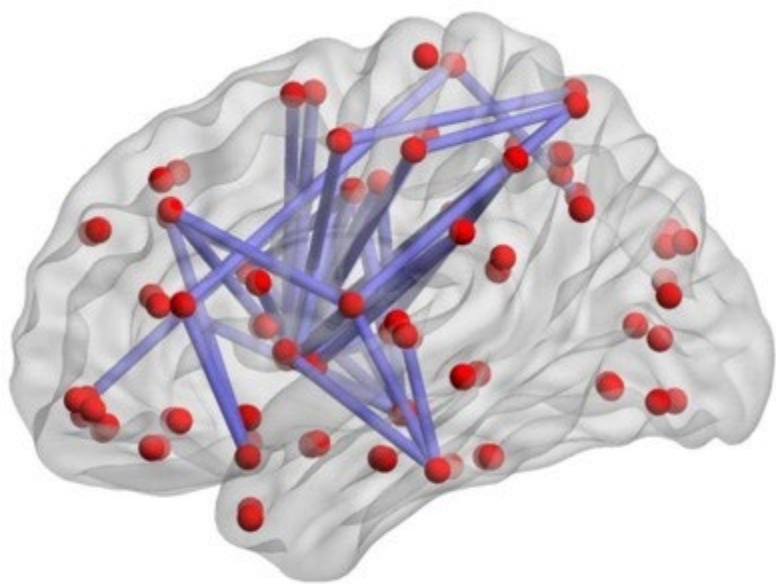
-**Impaired Stroop Performance** correlated to **fMRI changes in Anterior and Posterior Cingulate Cortex (Dong 2012)**

# Other Neurobiological Correlates in Internet Addiction Disorder

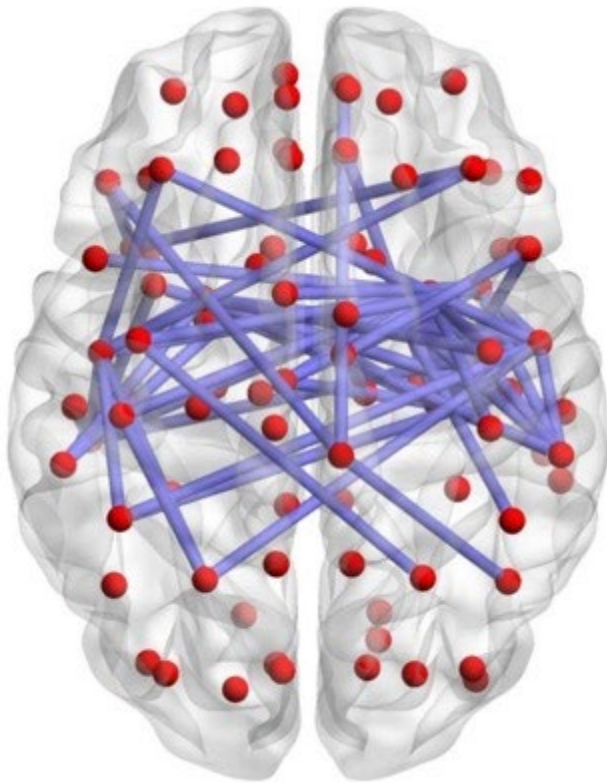
↓ cortico-striatal functional connectivity (24% prefrontal and 27% parietal), bilateral putamen most extensively involved subcortical brain region (Hong 2013)

↓ striatal dopamine transporters (Hou 2012)

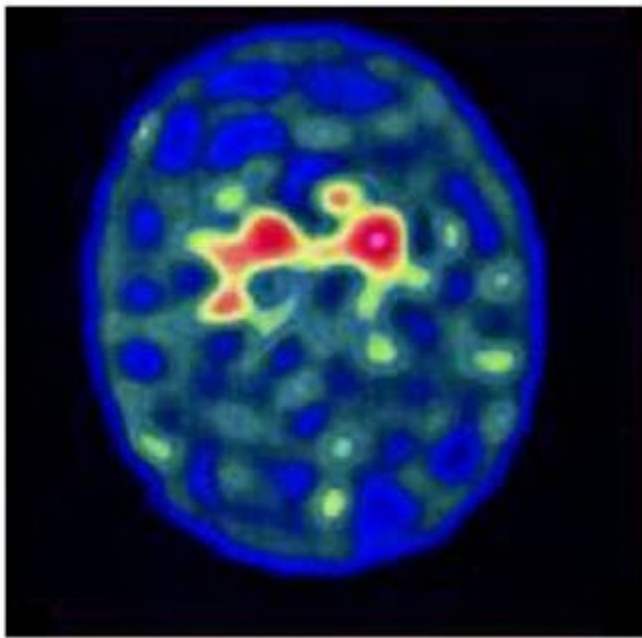
↓ striatal dopamine (D2) transporters, bilateral dorsal caudate and right putamen also affected (Kim 2011)



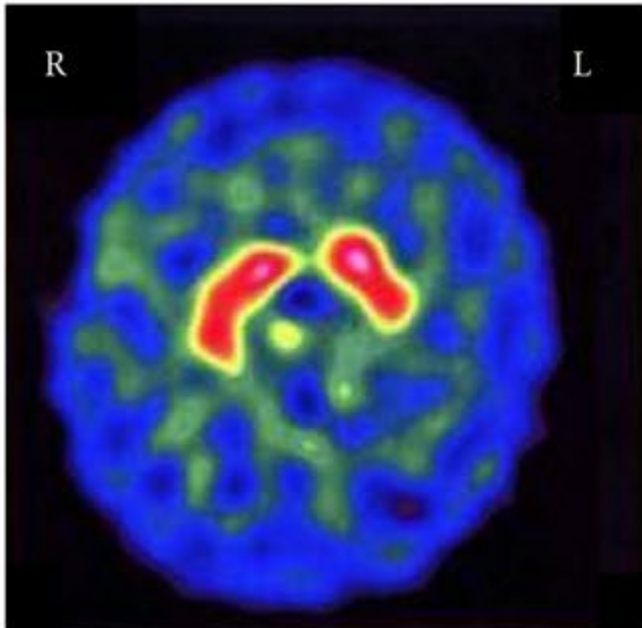
Decreased Brain  
Connectivity in  
Internet Addiction  
(Hong 2013)





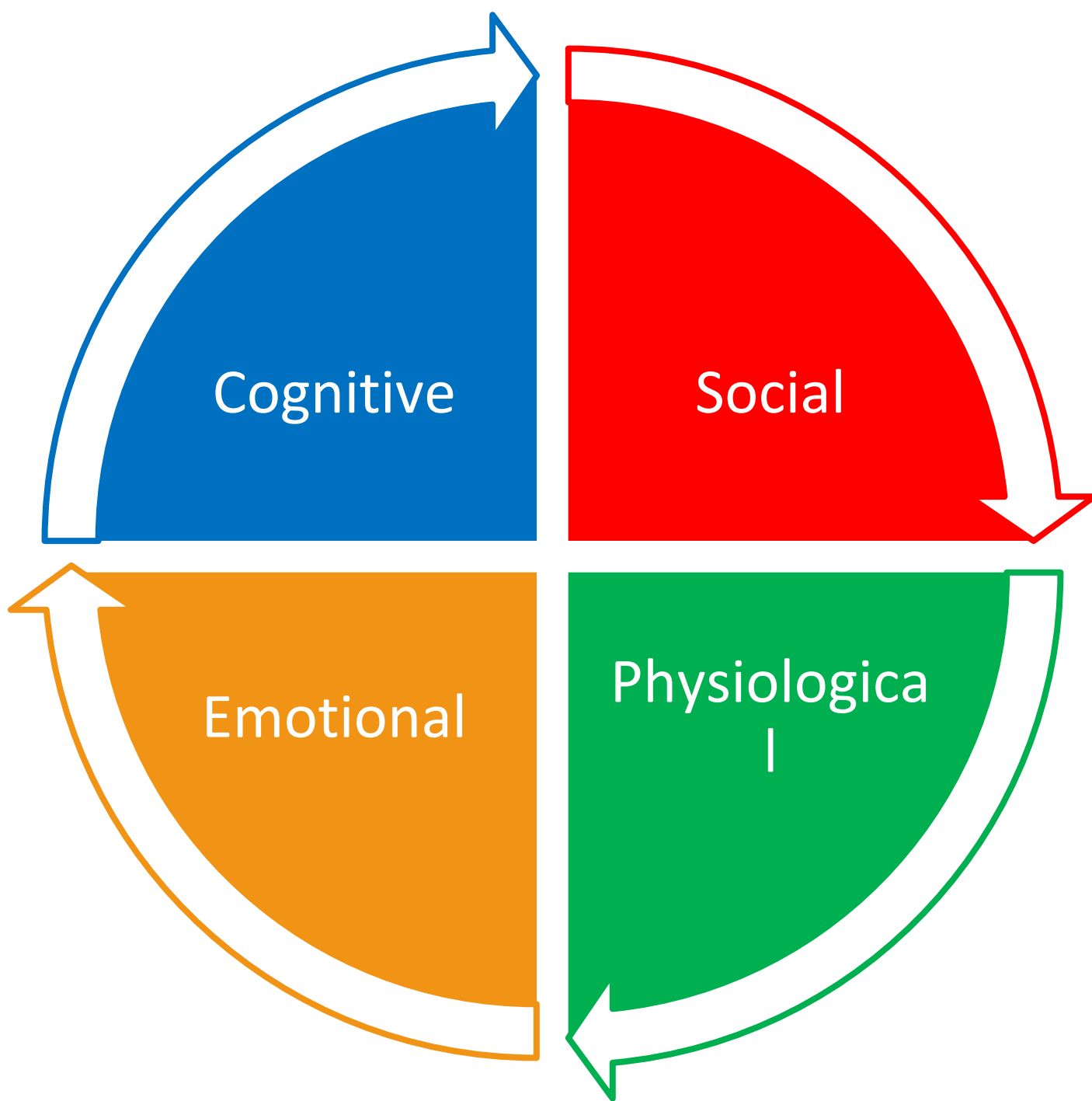


(b)



(c)

# Reduced Striatal Dopamine Transporters (Hou 2012)



# Blais 2008 (adolescents)

Increased Electronic Media Use Correlates With:

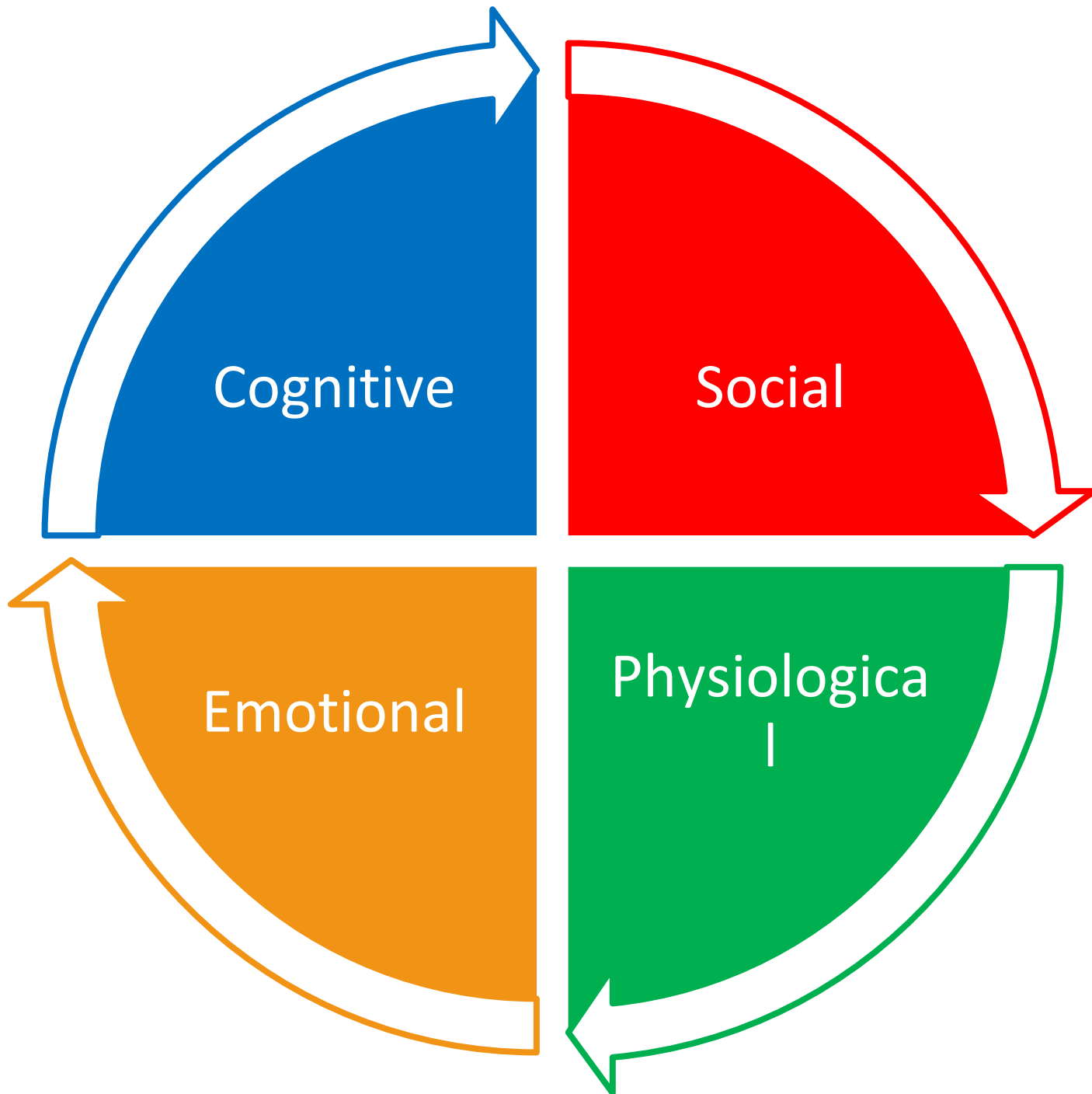
- Lower Friendship Trust
- Disrupted Communication
- Increased Rate of Peer Conflict
- Feeling Isolated

Interestingly, while using forms of messaging were positively associated with quality relationships, chat rooms and video games predicted decreased quality relationships

# Valkenburg 2007

Communicating online with existing friends positively impacted the closeness of existing “real world” relationships

Communicating online with strangers, or engaging online independently, did not improve the quality of existing “real world” relationships



# Correlations Between Extended Media Time and Emotional Functioning

American Academy of Pediatrics (AAP) Media Toolkit:

Extremes of Internet Use (Too Much or None) and Passive Social Media Use Correlated with:

- Increased Depression**
- Decreased Life Satisfaction**

# Cyberbullying (Nixon 2014)

Adolescent Victims Report Increased:

- Depressive Affect
- Anxiety
- Loneliness, Decreased Self-Esteem
- Fewer Friendships, Decreased Trust, Decreased School Attachment
- Hopelessness/Powerlessness
- Suicidal Ideation/Behavior**
- Somatic Symptoms

# Cyberbullying (Nixon 2014)

Perpetration of Cyberbullying Correlated With:

- Substance Use
- Aggression
- Delinquent behaviors

Of note, many perpetrators of cyberbullying also report being victims of cyberbullying.

Some data suggests that individuals identifying as both perpetrators and victims have the worst overall outcomes



# Content Matters



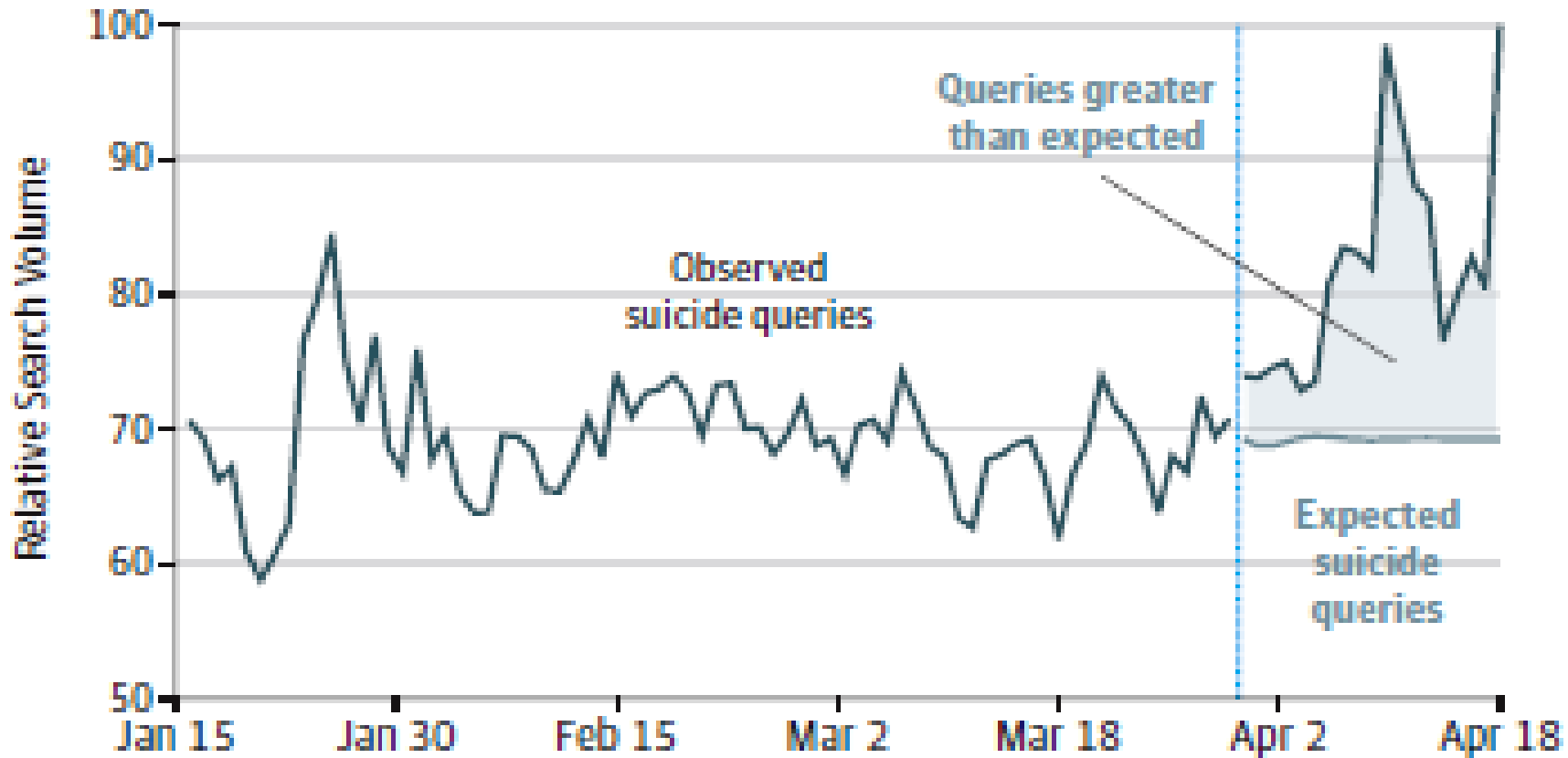
A NETFLIX ORIGINAL SERIES

13 REASONS WHY ▶

MARCH 31 | NETFLIX

Figure. Internet Searches Following the Release of *13 Reasons Why*

**A** All suicide queries



Comparison of expected internet suicide queries to actual queries following *13 Reasons Why*

# Impact of 13 Reasons Why (Ayers 2017)



900,000 to 1,500,000 more suicide related searches than expected in the 19 days following the show's release

All suicide related queries were up 19%, including a 26% increase in “how to commit suicide” and an 18% increase in “how to kill yourself”

However, queries for suicide hotlines and suicide prevention also increased at 12% and 23% respectively

# Revisiting the Werther Effect in the 21st Century: Bullying and Suicidality Among Adolescents Who Watched *13 Reasons Why*


[Aline Zimmerman, HSD](#) • [Arthur Caye, MD](#) • [André Zimmerman, MD](#) • [Giovanni A. Salum, MD, PhD](#)

[Ives C. Passos, MD, PhD](#) • [Christian Kieling, MD, PhD](#)  



- n = 21,062
- Predominantly Female, mean age 15.92
- 65.6% had a history of depression, and 64.5% had a lifetime history of suicidal ideation (SI), 78.7% had suffered from bullying
- + Prior SI Group: 16.5% expressed more SI and 59.2% reported less SI after watching the show
- - Prior SI Group: 6.4% reported new onset SI after watching the show

# Association Between the Release of Netflix's *13 Reasons Why* and Suicide Rates in the United States: An Interrupted Time Series Analysis

Jeffrey A. Bridge, PhD   • Joel B. Greenhouse, PhD • Donna Ruch, PhD • ... Lisa M. Horowitz, PhD, MPH •

Kelly J. Kelleher, MD • John V. Campo, MD • [Show all authors](#)

- Complex forecasting models used to assess monthly suicide rates among 3 ages groups
- Compared pre and post airing of the show
- After accounting for seasonal effects and an underlying increasing trend, found **suicide rate among 10-17 year olds increased significantly (28.9%) in the month immediately following release of show – the highest in 5 years**
- Suicide rate remained elevated in the two subsequent months relative to forecasted rates

# 13 Reasons Why Not

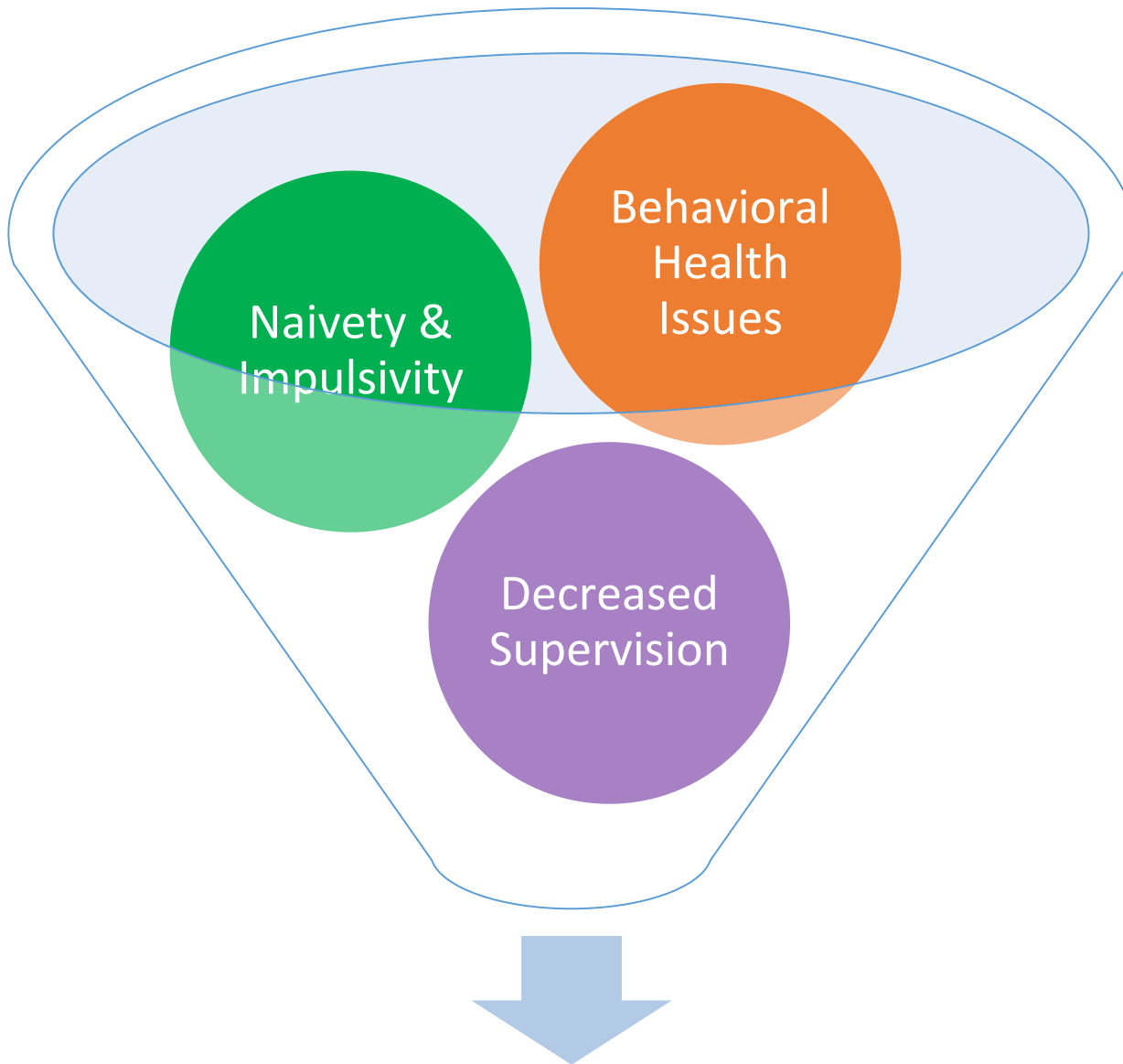
<https://www.youtube.com/watch?v=3tgMaFg18H8>

The emerging data regarding the influence of the Internet and social media on suicide behavior suggest that these forms of technology may introduce new threats to the public but also new opportunities for assistance and prevention. The initiative #13reasonswhynot is a great example of a “postvention” project originating in Michigan’s Oxford High School, in which students talk about their personal challenges in recordings similar to those of the show; but instead of blame, each student shares messages of gratitude and hope. The project has been promoted on social media, was replicated and used by various suicide prevention agencies, and appeared in news reports.

# Violent Media & Aggression

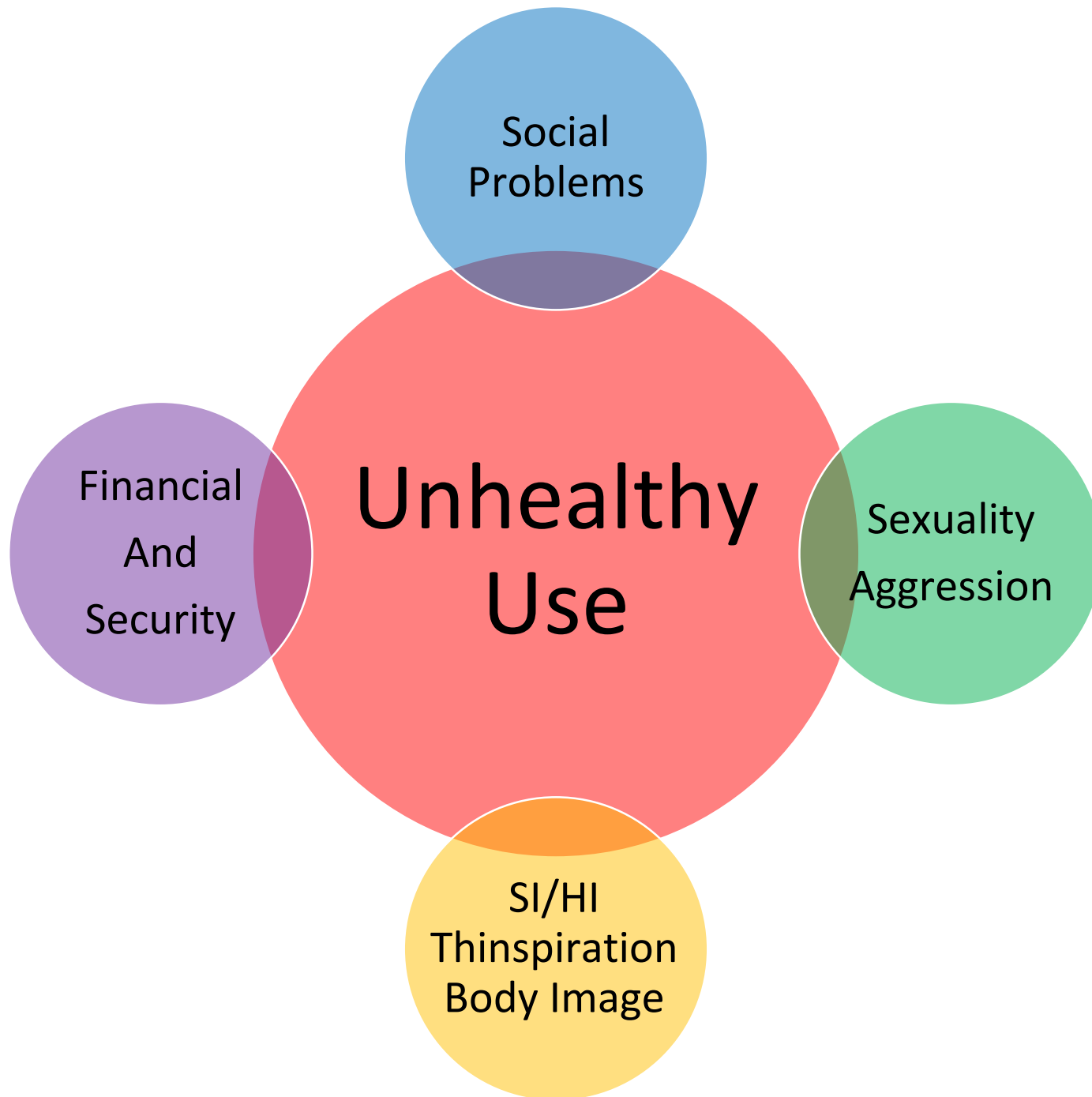
- >100 experimental, longitudinal, & correlational studies demonstrate link (*Anderson, '10, Greitmeyer '14, Exelmans '15, & Ferguson '15*)
- Desensitization
- Increase aggressive thoughts
- Increase aggressive behaviors
- Effect size small  $\sim 0.15$





**Recipe for Unhealthy Teen  
Social Media Use**





Social  
Problems

Unhealthy  
Use

Sexuality  
Aggression

SI/Hi  
Thinspiration  
Body Image

Financial  
And  
Security

What is a Clinician To Do? How  
Can We Help Families?

# Links to Practical Resources

- **AAP Family Media Plan:** <https://www.healthychildren.org/English/media/Pages/default.aspx>
- **Common Sense Media:** <https://www.commonsensemedia.org/>
- **AAP Family Media Plan:** <https://www.healthychildren.org/English/media/Pages/default.aspx>
- **AACAP Facts for Families:** [https://www.aacap.org/AACAP/Families and Youth/Facts for Families/Layout/FFF\\_Guide-01.aspx](https://www.aacap.org/AACAP/Families and Youth/Facts for Families/Layout/FFF_Guide-01.aspx)
- **AACAP Facts for Families Internet Use in Children:**  
<https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/Children-Online-059.aspx>
- **AACAP Facts for Families Listening to Music and Watching Music Videos:**  
<https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/The-Influence-Of-Music-And-Music-Videos-040.aspx>
- **AACAP Facts for Families Movies, Media, and Children:**  
<https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/Children-And-Movies-090.aspx>
- **AACAP Facts for Families News and Children:** <https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/Children-And-The-News-067.aspx>
- **AACAP Facts for Families Screen Time and Children:**  
<https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/Children-And-Watching-TV-054.aspx>
- **AACAP Facts for Families Social Media and Teens:**  
<https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/Social-Media-and-Teens-100.aspx>
- **AACAP Facts for Families TV Violence and Children:**  
<https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/Children-And-TV-Violence-013.aspx>
- **AACAP Facts for Families Video Games and Children: Playing with Violence:**  
<https://www.aacap.org/AACAP/Families and Youth/Facts for Families/FFF-Guide/Children-and-Video-Games-Playing-with-Violence-091.aspx>

# ARTICLE IN PRESS

## Electronic Screen Media Use in Autism

**Table 4**  
**Taking an electronic screen media history**

<b>Quantitative</b>	<b>Qualitative</b>
Hours per week and day	Activity (eg, offline games, online games, social media, email, YouTube, school work)
Hours per week and day	Type of games (if applicable): individual, online, role-player
Length of time between last use of ESM and going to bed	Emotional reaction of the child to parents setting limits on ESM

**Table 2**  
**Risk factors potentially leading to negative outcomes for youth with ASD using electronic screen media**

<b>Home/Parent Factors</b>	<b>Child Factors</b>	<b>Negative Outcomes</b>
<ul style="list-style-type: none"> <li>• Inconsistent parenting</li> <li>• Parental coercion and spanking</li> <li>• Exposure to inappropriate media</li> <li>• Heavy parental use</li> <li>• Constant media background noise</li> <li>• Screen as pacifier</li> </ul>	<ul style="list-style-type: none"> <li>• Temperament</li> <li>• Externalizing behaviors</li> <li>• Self-regulation and social-emotional problems</li> <li>• Difficulty disengaging</li> <li>• Resistance to limit setting</li> <li>• ASD-related barriers</li> </ul>	<ul style="list-style-type: none"> <li>• Increased child screen time</li> <li>• Decreased executive functioning in child</li> <li>• Decreased verbal and nonverbal parent-child interaction</li> <li>• Poorer family functioning</li> <li>• Decreased child play/development</li> </ul>

**Table 3**

Summary of recommendations from American Academy of Child and Adolescent Psychiatry Facts for Families guide on use of electronic screen media in children and adolescents and the American Academy of Pediatrics Media and Communication Toolkit for Families Recommendations

0–18 mo	18–24 mo	2–5 y	6–12 y	Adolescents
<ul style="list-style-type: none"> <li>• Avoid screens completely</li> <li>• Hands-on activities with human engagement facilitate normal cognitive, motor, language, and social-emotional development</li> <li>• Most time should be spent in hands-on activities without media in the child's environment</li> </ul>	<ul style="list-style-type: none"> <li>• Most time should be spent in hands-on activities without media</li> <li>• Very brief intervals</li> <li>• Focus on high-quality educational programming</li> <li>• Parents watch with children and explain content</li> </ul>	<ul style="list-style-type: none"> <li>• Most time should be spent in hands-on activities without media</li> <li>• &lt;1 h per day</li> <li>• Still emphasize educational and age-appropriate programming</li> <li>• Parent still watch with children and explain content</li> </ul>	<ul style="list-style-type: none"> <li>• Consistent time limits</li> <li>• Limit types of media</li> <li>• Monitor sleep, physical activity, and behavioral health effects</li> <li>• Screen-free zones: bedroom, dinner table</li> <li>• Screen-free times: meals, bedtime, family interaction</li> </ul>	<ul style="list-style-type: none"> <li>• &lt;2 h per day</li> <li>• Media-free zones and times</li> <li>• Ongoing education and communication</li> <li>• Parental supervision and limit setting</li> <li>• Parental modeling of healthy use</li> <li>• Limit media use when doing homework</li> </ul>

Data from American Academy of Child and Adolescent Psychiatry Facts for Families: Children and screen time. Available at: [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Children-And-Watching-TV-054.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Children-And-Watching-TV-054.aspx). Accessed November 10, 2017; and AAP Council on Communications and Media. Media use in school-aged children and adolescents. *Pediatrics* 2016;138(5):[pii:e20162592]



The internet is fast becoming trusted by both children and adults as reliable and accurate sources of information. Through the internet children now have access to an almost endless supply of information and opportunity for interaction. However, there can be real risks and dangers for an unsupervised child.

Most online services give children resources such as encyclopedias, current events coverage, and access to libraries and other valuable material. They can also play games and communicate with friends on social media platforms like Facebook, Twitter, Snapchat, etc. The ability to "click" from one area to another appeals to a child's natural impulsivity and curiosity and needs for immediate gratification or feedback.

Most parents teach their children not to talk with strangers, not to open the door if they are home alone, and not to give out information on the telephone to unknown callers. Most parents also monitor where their children go, who they play with, and what TV shows, books, or magazines they are exposed to. However, many parents don't realize that the same level of guidance and supervision must be provided for a child's online experience.

Parents cannot assume that their child will be protected by the supervision or regulation provided by the online services. Most "chat rooms" and social media sites are completely unsupervised. Because of the anonymous nature of the "screen name," children who communicate with others in these areas will not know if they are "talking" with another child or a child predator pretending to be a child or teen. Unlike the mail and visitors that a parent sees a child receive at home, e-mail or "chat room" activity is not seen by parents. Unfortunately, there can be serious consequences to children who have been persuaded to give personal information, (e.g. name, passwords, phone number, email or home address) or have agreed to meet someone in person.

Some of the other risks or problems include:

- accessing areas that are inappropriate or overwhelming
- being exposed to online information that promotes hate, violence, and pornography
- being misled and bombarded with intense advertising
- being invited to register for prizes or to join a club when they are providing personal or household information to an unknown source
- losing time from developing real social skills and from physical activity and exercise
- revealing too much personal information on social media sites
- being bullied on social media sites

In order to make a child's online experience more safe and educational, parents should:

- limit the amount of time a child spends online and "surfing the web"
- teach a child that talking to "screen names" in a "chat room" is the same as talking with strangers
- teach a child never to give out any personal identifying information to another individual or website online
- teach a child to never agree to actually meet someone they have met online
- never give a child credit card numbers or passwords that will enable online purchases or access to inappropriate services or sites
- remind a child that not everything they see or read online is true
- make use of the parental control features offered with your online service, or obtaining commercially available software programs, to restrict access to "chat lines," news groups, and inappropriate websites
- provide for an individual e-mail address only if a child is mature enough to manage it, and plan to periodically monitor the child's e-mail and online activity
- monitor the content of a child's personal webpage and screen name profile information
- teach a child to use the same courtesy in communicating with others online as they would if speaking in person -- i.e. no vulgar or profane language, no name calling, etc.
- insist that a child follow the same guidelines at other computers that they might have access to, such as those at school, libraries, or friends' homes

Parents should remember that communicating online does not prepare children for real interpersonal relationships. Spending time with a child initially exploring an online service and periodically participating with a child in the online experience gives parents an opportunity to monitor and supervise the activity. It is also an opportunity to learn together.

# Media Time Calculator

**Instructions:** Look through the categories below & add the amount of time, if any, your child spends on each activity. You can also add categories of your own. The calculator is already set with the recommended number of hours for sleep & physical activity. Once complete, you will be able to see how much time your child has left for screen time each day.

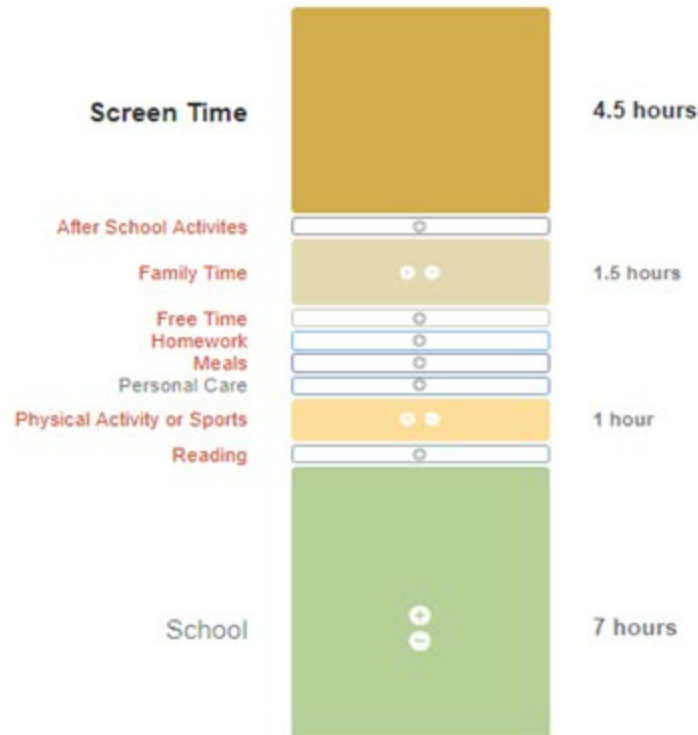
To find this information in Spanish, click [here](#).



**Gia**

2-5 years

[+ Add your own category](#)





## Screen Free Zones

Having areas of your home remain screen-free is important. Select from the list below & add them to your Family Media Plan to make sure your children understand w



Gia

2-5 years

**Mobile devices & TVs are not allowed in the following screen-free zones in our home:**

- Kitchen or dining room table
  - Keep family **mealtimes** & other family & social gatherings tech-free.
  
- Bedroom
  - Recharge devices overnight - outside your child's bedroom
  - incoming messages & calls can interfere with your child's sleep
  - help children avoid the temptation to use or check devices when they should be sleeping
  - emitted light from devices charging may still effect the quality of your child's sleep
  
- Stroller
  
- 

[Add Another](#)

# We Have Answers

Kids of all ages are swiping and scrolling, totally transfixed by screens of all sizes. Welcome to the new frontier of parenting. If you have questions on how to take control of the technology in your kids' lives, you came to the right place.

## Is it OK for my kid to start her own YouTube channel?

### YOUTUBE

Kids see YouTube as a way to express themselves, showcase their skills, and share their interests. Parents worry about the risks. With compromise on both sides, you can help kids pursue their passions while staying safe.

FAQS  
19

ARTICLES  
21

VIDEOS  
6

## How can I use media to teach my kid empathy?

### CHARACTER STRENGTHS AND LIFE SKILLS

Learn more about character strengths, tips for using media to bolster them, and recommendations for media the whole family can learn from and share.

FAQS  
97

ARTICLES  
72

VIDEOS  
6

## How much screen time is OK for my kid(s)?

### SCREEN TIME

Setting screen-time limits and helping kids moderate their own habits means finding the right balance for your individual family.

FAQS  
32

ARTICLES  
172

VIDEOS  
18

## What should I do if my kid is bullied online?

### CYBERBULLYING, HATERS, AND TROLLS

Find age-specific guidelines, videos, and articles to help with tough conversations – whether your kid is a bully or is being bullied.

FAQS  
23

ARTICLES  
12

VIDEOS  
9

# Coco

Movie review by [Sandie Angulo Chen](#), Common Sense Media



Common Sense says

age 7+

Stunningly animated, poignant tribute to family and culture.

PG | 2017 | 109 minutes

Save | Rate movie

[Sign in or join](#) to save for later

Parents say  
age 7+

Based on [38 reviews](#)


Kids say  
age 6+



Based on [27 reviews](#)



Get tickets on **FANDANGO**


## A LOT OR A LITTLE?



The parents' guide to what's in this movie.


**A+**  Educational value >


  Positive messages >



  Positive role models & representations >

  Violence & scariness >

  Sexy stuff >

**#!**  Language >

**\$**  Consumerism >

  Drinking, drugs & smoking >

### WHAT PARENTS NEED TO KNOW

Parents need to know that *Coco* is a vibrant Disney/Pixar film that explores the traditions of the Day of the Dead, a child's desire to become a musician despite his family's wishes, and the power of unconditional love. Told from the point of view of Miguel (voiced by [Anthony Gonzalez](#)), a young boy who ends up in the Land of the Dead, the movie -- which features an all-star Latino voice cast (including [Gael García Bernal](#) and [Benjamin Bratt](#)), as well as a Latino co-director and many Latino crew members -- is a tribute to Mexican traditions and customs. The Land of the Dead contains some potentially disturbing imagery, but most kids will probably get used to all of the skeletons quickly. A few moments of life-or-death peril are fraught with tension, but none of the major characters die (at least, who aren't already dead). There's also some drinking by adult characters (a shot, cocktails at a party) and a few uses of words like "stupid." While all is well in the end, the movie can be dark and sad (as with most Pixar films, it's likely some viewers will cry), especially for those who've lost beloved relatives. But it also has powerful themes of perseverance, teamwork, and gratitude and encourages audiences to love and appreciate their family and always follow their dreams.

# SUMMARY

In moderation, media use can be developmentally appropriate and healthy, and can strengthen real world relationships

There are many associations between extended media time and impairments in cognitive, physiological, social, and emotional functioning in the child and adolescent population

Healthcare providers should be taking an electronic and media screen history from their patients, and should also be educating at both a clinic level and a much broader level (schools, public policy, community outreach)

There are many resources for both Child and Adolescent Psychiatrists and for families that can be incredibly helpful in navigating what can be a tough and distracting media environment

# References

- Wood B, Rea M, Plitnick B, et al. "Light Level and Duration of Exposure Determine the Impact of Self-Luminous Tablets on Melatonin Suppression." *Applied Ergonomics*. 2013 Mar;44(2):237-40.
- Yuan, Kai, Wei Qin, Guihong Wang, Fang Zeng, Liyan Zhao, Xuejuan Yang, Peng Liu, et al. "Microstructure Abnormalities in Adolescents with Internet Addiction Disorder." Edited by Shaolin Yang. *PLoS ONE* 6, no. 6 (June 3, 2011): e20708. doi:10.1371/journal.pone.0020708.
- Zhou, Yan, Fu-Chun Lin, Ya-Song Du, Ling-di Qin, Zhi-Min Zhao, Jian-Rong Xu, and Hao Lei. "Gray Matter Abnormalities in Internet Addiction: A Voxel-Based Morphometry Study." *European Journal of Radiology* 79, no. 1 (July 2011): 92–95. doi:10.1016/j.ejrad.2009.10.025.
- Weng, Chuan-Bo, Ruo-Bing Qian, Xian-Ming Fu, Bin Lin, Xiao-Peng Han, Chao-Shi Niu, and Ye-Han Wang. "Gray Matter and White Matter Abnormalities in Online Game Addiction." *European Journal of Radiology* 82, no. 8 (August 2013): 1308–1312. doi:10.1016/j.ejrad.2013.01.031.
- Yuan, Kai, Ping Cheng, Tao Dong, Yanzhi Bi, Lihong Xing, Dahua Yu, Limei Zhao, et al. "Cortical Thickness Abnormalities in Late [Adolescence](#) with Online Gaming Addiction." Edited by Bogdan Draganski. *PLoS ONE* 8, no. 1 (January 9, 2013): e53055. doi:10.1371/journal.pone.0053055.
- Yuan, Kai, Chenwang Jin, Ping Cheng, Xuejuan Yang, Tao Dong, Yanzhi Bi, Lihong Xing, et al. "Amplitude of Low Frequency Fluctuation Abnormalities in Adolescents with Online Gaming Addiction." Edited by Krish Sathian. *PLoS ONE* 8, no. 11 (November 4, 2013): e78708. doi:10.1371/journal.pone.0078708.
- Hong, Soon-Beom, Jae-Won Kim, Eun-Jung Choi, Ho-Hyun Kim, Jeong-Eun Suh, Chang-Dai Kim, Paul Klauser, et al. "Reduced Orbitofrontal Cortical Thickness in Male Adolescents with Internet Addiction." *Behavioral and Brain Functions* 9, no. 1 (2013): 11. doi:10.1186/1744-9081-9-11.
- Hong, Soon-Beom, Andrew Zalesky, Luca Cocchi, Alex Fornito, Eun-Jung Choi, Ho-Hyun Kim, Jeong-Eun Suh, Chang-Dai Kim, Jae-Won Kim, and Soon-Hyung Yi. "Decreased Functional Brain Connectivity in Adolescents with Internet Addiction." Edited by Xi-Nian Zuo. *PLoS ONE* 8, no. 2 (February 25, 2013): e57831. doi:10.1371/journal.pone.0057831.
- Lin, Fuchun, Yan Zhou, Yasong Du, Lindi Qin, Zhimin Zhao, Jianrong Xu, and Hao Lei. "Abnormal White Matter Integrity in Adolescents with Internet Addiction Disorder: A Tract-Based Spatial Statistics Study." *PLoS One* 7, no. 1 (2012): e30253. doi:10.1371/journal.pone.0030253.
- Aguilar-Farias N, Toledo-Vargas M, Miranda-Marquez S, Cortinez-O’Ryan A, Cristi-Montero C, Rodriguez-Rodriguez F, Martino-Fuentealba P, Okely AD, Cruz B. Sociodemographic Predictors of Changes in Physical Activity, Screen Time, and Sleep Among Toddlers and Preschoolers in Chile During the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*. 2021 Jan; 18(1): 176.
- Neshteruk CD, Zizzi A, Suarez L, Erikson E, Kraus WE, Li JS, Skinner AC, Story M, Zucker N, Armstrong SC. Weight-Related Behaviors of Children with Obesity During the COVID-19 Pandemic. *Childhood Obesity*. 2021 Sep;17(6):371-378.
- Ayers JW, Althouse BM, Leas EC, Dredze M, Allem JP. Internet Searches for Suicide Following the Release of 13 Reasons Why. *JAMA Internal Medicine*. 2017; 177:1527-1529.
- Kieling C, Zimmerman A, Caye A, Zimmerman A, Slum G, Passos IC. Revisiting the Werther Effect in the 21<sup>st</sup> Century: Bullying and Suicidality Among Adolescents Who Watched 13 Reasons Why. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2018; 57: 610-613.
- Bridge JA, Greenhouse JB, Ruch D, Horowitz LM, Kelleher KJ, Campo JV. Association Between the Release of Netflix’s 13 Reasons Why and Suicide Rates in the United States: An Interrupted Time Series Analysis. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2020 Feb; 59(2):236-243.

# References

- Dong, Guangheng, Elise E Devito, Xiaoxia Du, and Zhuoya Cui. "Impaired Inhibitory Control in 'Internet Addiction Disorder': A Functional Magnetic Resonance Imaging Study." *Psychiatry Research* 203, no. 2–3 (September 2012): 153–158. doi:10.1016/j.psychres.2012.02.001.
- Ko, Chih-Hung, Gin-Chung Liu, Sigmund Hsiao, Ju-Yu Yen, Ming-Jen Yang, Wei-Chen Lin, Cheng-Fang Yen, and Cheng-Sheng Chen. "Brain Activities Associated with Gaming Urge of Online Gaming Addiction." *Journal of Psychiatric Research* 43, no. 7 (April 2009): 739–747. doi:10.1016/j.jpsychires.2008.09.012.
- Kühn, S, A Romanowski, C Schilling, R Lorenz, C Mörsen, N Seiferth, T Banaschewski, et al. "The [Neural](#) Basis of Video Gaming." *Translational Psychiatry* 1 (2011): e53. doi:10.1038/tp.2011.53.
- Han, Doug Hyun, Nicolas Bolo, Melissa A. Daniels, Lynn Arenella, In Kyoonyoung Lyoo, and Perry F. Renshaw. "Brain Activity and Desire for Internet Video Game Play." *Comprehensive Psychiatry* 52, no. 1 (January 2011): 88–95. doi:10.1016/j.comppsy.2010.04.004.
- Kim, Sang Hee, Sang-Hyun Baik, Chang Soo Park, Su Jin Kim, Sung Won Choi, and Sang Eun Kim. "Reduced Striatal Dopamine D2 Receptors in People with Internet Addiction." *Neuroreport* 22, no. 8 (June 11, 2011): 407–411. doi:10.1097/WNR.0b013e328346e16e.
- Hou, Haifeng, Shaowe Jia, Shu Hu, Rong Fan, Wen Sun, Taotao Sun, and Hong Zhang. "Reduced Striatal Dopamine Transporters in People with Internet Addiction Disorder." *Journal of Biomedicine & Biotechnology* 2012 (2012): 854524. doi:10.1155/2012/854524.
- Suri D, Vaidya VA. "Glucocorticoid Regulation of Brain-Derived Neurotrophic Factor: Relevance to Hippocampal Structural and Functional Plasticity." *Neuroscience*. 2013 Jun;239:196-213.
- "Media and Children." American Academy of Pediatrics. Web. 14 Oct 2015. <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/pages/media-and-children.aspx>
- American Heart Association. "Many Teens Spend 30 Hours A Week on 'Screen Time' During High School." *Science Daily*. 14 Mar 2008. Web. 14 Oct 2015. <http://www.sciencedaily.com/releases/2008/03/080312172614.htm>
- Pressman RM, Owens JA, Evans AS, et al. "Examining the Interface of Family and Personal Traits, Media, and Academic Imperatives Using the Learning Habit Study." *The American Journal of Family Therapy*. 2014 Oct. 42(5):347-363.
- Nixon CL. "Current Perspectives: The Impact of Cyberbullying on Adolescent Health." *Adolescent Health, Medicine and Therapeutics*. 2014 Aug;5:143-58.

# References

- Cox R, Skouteris H, Rutherford L, Fuller-Tyszkiewicz M, Dell'Aquila D, Hardy LL. Television viewing, television content, food intake, physical activity and body mass index: a cross-sectional study of preschool children aged 2-6 years. *Health Promot J Austr.* 2012;23(1):58–62pmid:22730942
- Wen LM, Baur LA, Rissel C, Xu H, Simpson JM. Correlates of body mass index and overweight and obesity of children aged 2 years: findings from the healthy beginnings trial. *Obesity (Silver Spring).* 2014;22(7):1723–1730pmid:24415528
- Lubans, D. R., Smith, J. J., Peralta, L. R., Plotnikoff, R. C., Okely, A. D., Salmon, J., . . . Morgan, P. J. (2016). A school-based intervention incorporating smartphone technology to improve health-related fitness among adolescents: rationale and study protocol for the NEAT and ATLAS 2.0 cluster randomised controlled trial and dissemination study. *BMJ Open*, 6(6), e010448. doi:10.1136/bmjopen-2015-010448
- Gurnani M, Birken C, Hamilton J. Childhood Obesity: Causes, Consequences, and Management. *Pediatr Clin North Am.* 2015 Aug;62(4):821-40.
- Paavonen EJ, Porkka-Heiskanen T, Lahikainen AR. Sleep Quality, Duration and Behavioral Symptoms Among 5-6-Year-Old Children. *Eur Child Adolesc Psychiatry.* 2009;18(12):747-754.
- Velten-Schurian K, Hautzinger M, Poets CF, Schlarb AA. Association Between Sleep Patterns and Daytime Functioning in Children with Insomnia: the Contribution of Parent-Reported Frequency of Night waking and Wake Time After Sleep Onset. *Sleep Med.* 2010;11(3):281-8.
- Singareddy R, Krishnamurthy VB, Vgontzas AN, Fernandez-Mendoza J, Calhoun SL, Shaffer ML, Bixler EO. Subjective and Objective Sleep and Self-Harm Behaviors in Young Children: A General Population Study. *Psychiatry Res.* 2013 Oct;209(3):549-53.
- Li L, Zhang S, Huang Y, Chen K. Sleep Duration and Obesity in Children: A Systematic Review and Meta-Analysis of Prospective Cohort Studies. *J Paediatr Child Health.* 2017 Apr;53(4):378-85.
- Sadeh A, Gruber R, Raviv A. "Sleep, Neurobehavioral Functioning, and Behavioral Problems in School-Age Children." *Child Development.* 2002 Mar-Apr;73(2):405-17.
- Blais JJ, Craid WM, Pepler D, et al. Adolescents Online: The importance of Internet Activity Choices to Salient Relationships. *J Youth Adolesc.* 2008 May;37(5):522-36.
- Valkenburg PM, Peter J. Preadolescents' and Adolescents' Online Communication and Their Closeness to Friends. *Dev Psychol.* 2007 Mar;43(2):267-77.



# Relevant Publications

Gwynette FM, **Sidhu S**, Ceranoglu TA. “Electronic Screen Media Use in Youth with Autism Spectrum Disorders.” *Child and Adolescent Psychiatric Clinics of North America*. Status: in press.

**Sidhu S**. “Name No Names: The Role of the Media in Reporting Mass Shootings.” *Journal of the American Academy of Child and Adolescent Psychiatry*. 2017 Jan; 56(1):3-4. PMID: 27993225.

**Sidhu S**. “The Yin and Yang of Social Media Use in Our Patients.” *AACAP News*. 2015 Nov/Dec;46(6):261-2.

**Sidhu S**. “Doctor, When Should My Child Be Allowed to Start Using Social Media?” *AACAP News*. 2015 Jul/Aug;46(4):169-170.

**Sidhu S**, Gwynette MF, Veenstra-VanderWeele JM. “46.0 Will You Friend Me? Understanding the Complex Interplay Between Social Media, Online Gaming, and Technology in Autism Spectrum Disorder.” *Journal of the American Academy of Child and Adolescent Psychiatry*. 2016 Oct;55(10) Supplement: S70.

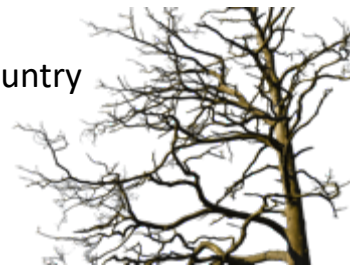
Navigating Media Use in American Indian and Alaska  
Native Youth and Families:  
Jennifer Clay



# Approaches to Internet Addiction and the Impact on Native & Indigenous Youth

## Considerations:

- Pros and Cons of Internet/Social Media
- With pandemic, there is an internet/technology dependency on and off the reservations; a demand to be online in work and social media is high; it impacts health, self-care; often with disrupted sleep patterns
- “Reliance on smart devices and technologies for day to day tasks replaces the efforts of the human brain on the development of the neural circuits and enhancement of cognition, which in turn gradually diminishes neural capability whilst reinforcing over-dependency.” (Husani, et. al. 2011)
- AI/AN lens: digitization can be both a positive community connection tool or the extreme behavior of an addiction
- Acknowledging how history and AI/AN unique experiences play a role in use and misuse of technology
- Explored current research of journal articles specific to Native youth internet use in Indian Country



# Journal Research with Relevant Discussions:

Topics discuss various addictions - some addressing the topic of Internet addiction in Indian Country but not specifically regarding the Native Youth population

- 2011: *Associations of American Indian children's screen time behavior with parental television behavior, parental perceptions of children's screen time, and media-related resources in the home.*
- 2014: *Internet sociology: Impact of Facebook addiction on the lifestyle and other recreational activities of the Indian youth.*
- 2015: *The Digital Reality: E-government and access to technology and internet for American Indian and Alaska Native populations.*
- 2016: *A systematic review and meta-analysis of screen time behaviour among North American Indigenous populations.*
- 2016: *Social media and digital technology use among Indigenous young people in Australia: a literature review.*
- 2021: *The Human Digitalisation Journey: Technology First at the Expense of Humans?*
- 2022: *Substance and Behavioral Addictions among American Indian and Alaska Native Populations*
- 2023: *Tribal reservation adolescent connections study: A study protocol using mixed methods for examining social networks and associated outcomes among American Indian youth on a Northern Plains reservation.*

# Associations of American Indian Children's Screen-Time Behavior With Parental Television Behavior, Parental Perceptions of Children's Screen Time, and Media-Related Resources in the Home, 2011, *Preventing Chronic Disease*

- Study explored correlations between high rates of obesity in AI children, screen-time behavior and how this may be influenced by environment and parents' behavior
- Study looked at parental television watching time, parental perceptions of children's screen time, and media-related resources in the home
- Specifically among Oglala Lakota youth/Pine Ridge Reservation
- $n = 431$  child/parent dyad
- Study was a part of baseline data from obesity prevention intervention
- Obesity is disproportionately high among AI ( $\frac{1}{3}$  of AI 4yr olds are obese)

# Associations of American Indian Children's Screen-Time Behavior With Parental Television Behavior, Parental Perceptions of Children's Screen Time, and Media-Related Resources in the Home, 2011, *Preventing Chronic Disease*

## Study Findings

- Boys engaged in .30 more hrs of screen time per day than girls
- Children's screen time decreased by .02 hrs per day for every 1 kg increase in parental BMI
- Children's screen time increased by .37 hrs per day for every 1 hour increase in parental television watching time
- Children whose parents agreed with the statement that *they spent to much screen time* engaged in 1.06 hrs more screen time per day than children whose parents disagreed with this statement



# Associations of American Indian Children's Screen-Time Behavior With Parental Television Behavior, Parental Perceptions of Children's Screen Time, and Media-Related Resources in the Home, 2011, *Preventing Chronic Disease*

## Study Findings

- Children whose parents responded that they *often or always watched television after school or in the event* engaged in 1.0 more hours of screen time per day than children whose parents responded *never, rarely, or sometimes* to this statement
- Children whose parents *often or always limited child television time* engaged in .38 fewer hours of screen time per day than children whose parents did not limit TV time
- **Children's screen time was associated with child's sex, parental BMI and television watching time, parental perceptions that the child spent too much time screen time, how often the child watched television after school or in the evening, how often parents limited their tv time, and presence of other media in the home**

# Associations of American Indian Children's Screen-Time Behavior With Parental Television Behavior, Parental Perceptions of Children's Screen Time, and Media-Related Resources in the Home, 2011, *Preventing Chronic Disease*

## Study Conclusion:

- “Changes in parental television watching time, parental influence over children's screen-time behavior, and availability of media-related resources in the home could decrease screen time and may be used as a strategy for reducing overweight and obesity in AI children.”





# A Systematic Review and Meta-Analysis of Screen Time Behaviour among North American Indigenous Populations (2016)

- Screen time is associated w/increased obesity and other health risks (diabetes)
  - Generally greater overall screen time among First Nations/American Indian Youth vs Europeans
- Lit review evaluated screen time among North American Indigenous populations compared with North American Europeans
- Children most likely to exceed recommended screen time (2 hrs per day) include
  - rural residences
  - overweight/obese children
  - those from lower socioeconomic households
  - North American Indigenous populations (include Canada First Nations, Inuit and Metis & USA AI) fall within those categories

# A Systematic Review and Meta-Analysis of Screen Time Behaviour among North American Indigenous Populations (2016)

## Study Findings

- AI/AN populations demonstrate high levels of screen time with levels above recommendations for many adults, children/youth
- Highest screen time behaviors correlated with Indigenous groups at the greatest risk of cardiovascular disease, obesity, HBP
  - decreased energy expenditure and high caloric intake; displaced physical activity
- Additional research is needed to assess interventions to reduce screen time



# Approaches to Internet Addiction and the Impact on Native & Indigenous Youth

## Critical for Providers:

- Understanding population hx: acquiring your own understanding of AI/AN history
- Key issues/dates; particularly genocidal history, broken treaties, and the Boarding School Era
  - common etiologies within Residential School Syndrome
- All tribes are not a monolith; however, some overarching themes and metaphors exist
- Are you out of balance? Are you Walking in the Beauty Way?
- Determine any boarding school experiences from upstairs on the genogram
- Even if we don't know or deny our full history/identity; it does not remove us from the impact of it



# Approaches in Indian Country

- The need to increase culturally responsive care
- The need to incorporate NA/AI approaches into healthcare that promote well-being and resilience rather than a damage-centered approach
- “There is something wrong with you and we need to fix it”
- Collaborative dialogue - what do you think is out of balance in your life? What can we do together to create balance?
- Do you feel the path that you are walking is a path of beauty?

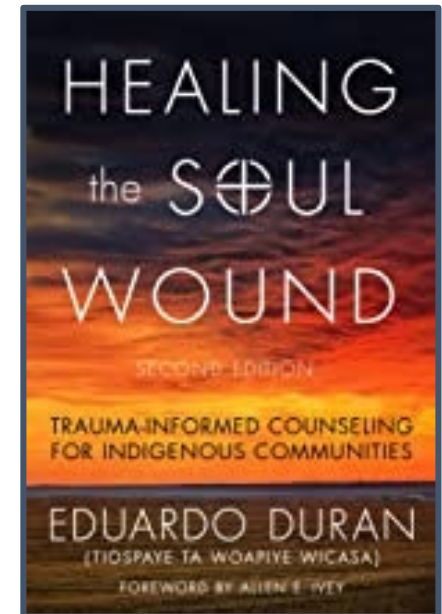


# Approaches to Wellness in Indian Country

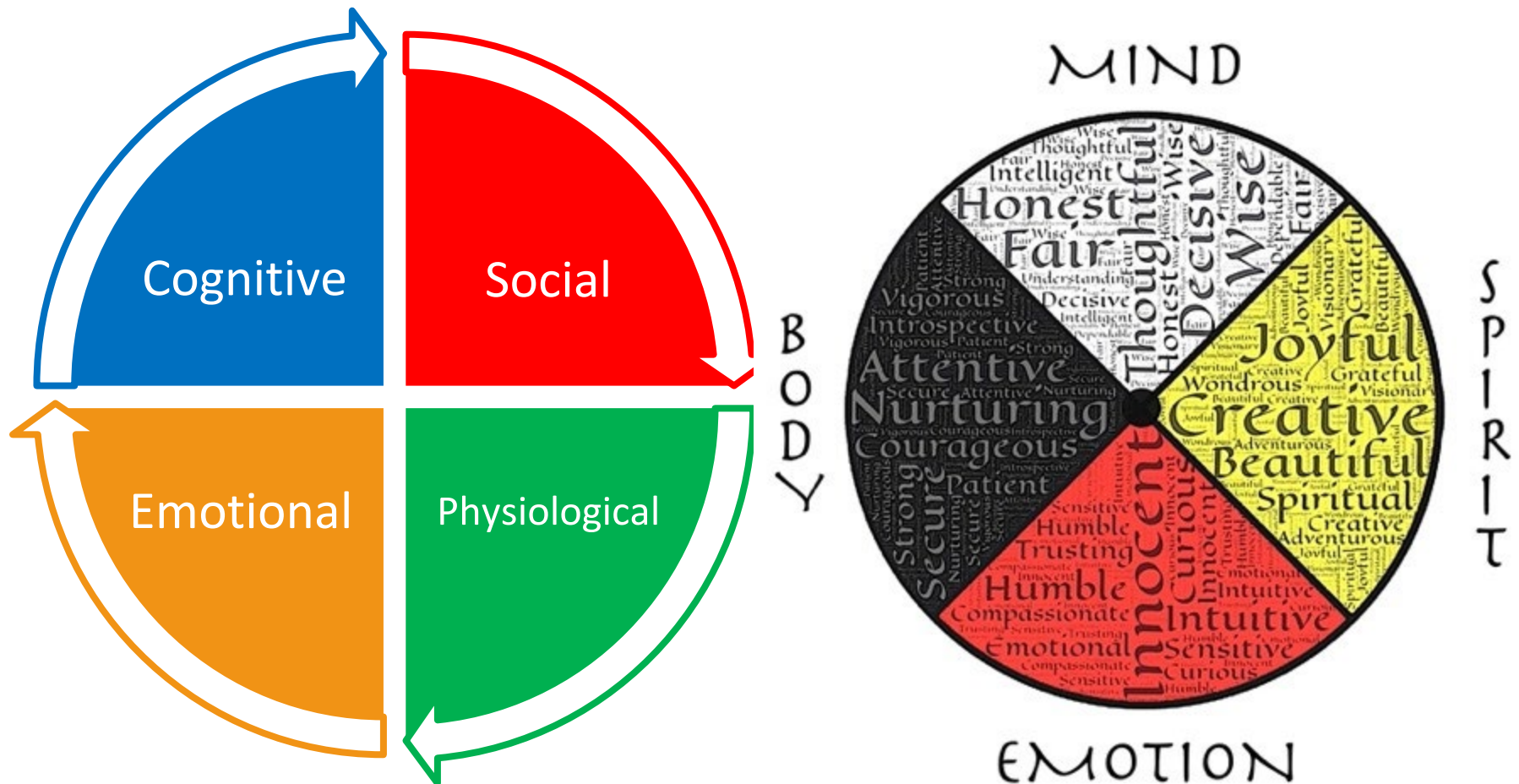
- Addiction philosophy (Duran & Duran, 1995) (Duran, et. al., 1998) (Duran, 2006)
- Duran's "Root Teacher," Tarrence, viewed all addictions as Indian medicine, as spirits; dreamtime medicine that comes from life itself - Earth awareness
- These spirits have life and they possess duality
- Looking for wholeness: both positive & negative aspects

# Approaches to Wellness in Indian Country

- Addictions have activated the negative side of medicine
- Addiction is a spiritual disorder
- Jung calls it a spiritual thirst for wholeness
- Duran talks about the need for culturally based approaches to historical/transgenerational trauma and addiction
- Approaches that have many facets and are multidimensional containing both intervention and prevention strategies



# Four Directions/Four Pathways: Maintaining Balance



# 2022 Substance and Behavioral Addictions among American Indian and Alaska Native Populations

- Substance and Behavioral Addictions among American Indian and Alaska Native Populations
- Conducted and synthesized by Indigenous researchers using a culturally centered approach
- Study looked at both behavioral addictions and cultural resilience factors that may potentially reduce the addiction
- Lit review was limited to US and US history







# Substance and Behavioral Addiction among AI/AN Populations

- 69 articles
- Cross-sectional design; both qual and quan
- Broken into two sections: one that highlights factors associated with substance abuse *inclusive of* protective factors associated with substance abuse
- The second category, behavioral addiction (gambling, texting, internet use, etc.)
- Studies that honored Indigenous ways of knowing/Indigenous Methodologies that included Indigenous & community voices

# Study: Substance and Behavioral Addiction among AI/AN Populations

- Study examined structural and psychosocial risks and protective factors
- Results: numerous risk factors
  - life stressors
  - severe trauma/ high ACE's
  - family hx of substance abuse
  - tobacco, alcohol, opioid, stimulant addictions
- **Behavioral risk factors/protective factors not well understood**
  - gambling, texting, internet use, shopping, and love



# Substance and Behavioral Addiction among AI/AN Populations

- Higher risk factors increases potential for addiction;
- **Historical trauma is a risk factor that permeates all levels of influence**
- Protective factors are within multiple domains: individual, family, structural/socio-cultural
- Sociocultural Risk Factors: Findings show historical and cultural norms have been more permissive of men drinking large quantities of alcohol
- Impacts of Urban living vs living on the reservation
- **Living on the reservation - immersed in cultural context**
- Urban AI/AN live within American mainstream practices
- Navigating a cultural context that differs from ancestors



# Substance and Behavioral Addiction among AI/AN Populations

- Substance abuse provides respite from acculturation and balancing roles in both cultures

Impacts of poverty and environment - forced relocation and poverty related stress, exposure to violence, and substance have a close association

Protective factors: community, individual, family

- culture as prevention
- language
- traditions
- heritage through elders
- strong cultural identity
- healing practices build cultural identity (Wellbriety)
- healing practices such as storytelling
- Drum Assisted Recovery Therapy



# Behavioral Addiction among AI/AN Populations

- Dysregulated behaviors to satisfy “appetite”; maladaptive with significant impairment
- Sx range from mood modification, salience, tolerance, conflict and relapse to neglect of personal life (Modi & Ghandi 2014)
- Loss of connection/loss of relationships
- Reflect difficulty with impulse control
- Repetitive engagement in such behaviors despite negative consequences qualifies as addiction
- **More studies are needed recognizing the ecological and historical context for addictive behaviors among AI/AN**

# Behavioral Addiction among AI/AN Populations

- The need to fulfill addiction is short-lived; a new cycle of need
- **Gap in research between behavioral addictions among AI/AN populations - specifically in AI/AN youth**
- Study on AI/AN youth in CA found most prevalent addictions were texting, internet use, love, and shopping



# 2023: Tribal Reservation Adolescent Connections Study, Schultz, et. al.: A Social Network Analysis

- A protocol using mixed methods for examining social networks and associated outcomes among American Indian youth on a Northern Plains reservation
- Collective cultural and traditional practices make it vital for interpersonal and multigenerational networks
- Study addresses how social networks impact youth risk and resilience

Intergenerational trauma from settler colonialism directly impacts AI youth exposure to substance use, suicide, and violence



## 2023: Tribal Reservation Adolescent Connections Study, Schultz, et. al.

- Study introduces SNA (social network analysis)
- SNA examines the dynamic nature of peer networks
- How peer relationships play a role in development of adolescent risk and protective behaviors
- SNA study provides insights into behavioral patterns of substance use, prevention and intervention
- Can this be applied to internet/social media addiction?





# 2023: Tribal Reservation Adolescent Connections Study, Schultz, et. al.

## SNA Premise/Exploratory

- Social Networks in AI Reservation Communities
- Kinship Networks: cultural/traditional practices
- Intergenerational Networks
- Resource Networks
- Study addressed critical need for effective strategies to improve health outcomes for AI youth
- Understanding complex social networks to identify what may be missing and what may be effective



# **2016: Social media and digital technology use among Indigenous young people in Australia: a literature review. (22 articles)**

- Article explored how digital technologies are used with Indigenous youth; positive and negative impacts
- Indigenous youth familiarity with technology provides a sense of fearlessness and control
- Opportunities to participate and communicate in new ways

# **2016: Social media and digital technology use among Indigenous young people in Australia: a literature review.**

## **Barriers to Use**

- Remoteness, access, socioeconomic status, family structure, education level and employment status
- Many Indigenous youth do not have computers or internet access

# **2016: Social media and digital technology use among Indigenous young people in Australia: a literature review.** (22 articles)

## **Negative Use**

- Cyber bullying/cyber racism
- Exchange of sexually explicit content w/minors
- Generational gap in knowledge and use of social media between Indigenous youth and parents/Elders who are less familiar
- Communication mediated by technology has disrupted traditional forms of interaction (loss of communication through gesture, sign, and gaze (Kral (2014)
- Less control by older generations to reduce the capacity for traditionally socially sanctioned forms of conflict resolution and social control (cyber bullying goes unaddressed)
- increased connectivity between people who live far away from each other - long distance conflicts rather than local conflicts

# 2016: Social media and digital technology use among Indigenous young people in Australia: a literature review. (22 articles)

## Four Identified themes:

- **Identity:** opportunities for Indigenous youth to “perform” their Indigenous identities online - sharing stories or being a part of a larger Indigenous online community
- Indigenous youth use social media to help form, affirm and strengthen identity

# 2016: Social media and digital technology use among Indigenous young people in Australia: a literature review.

## Identified Themes

### Power and Control

- Though often lacking mobile phone service in areas; Indigenous youth found resourceful ways to gain online access
- They have control of participation and use
- Self-directed nature allows them to access information themselves enabling new forms of agency
- Many become indigenous activists; a tool for protest and activism
- Opportunity to represent themselves rather than “the other”



# **2016: Social media and digital technology use among Indigenous young people in Australia: a literature review.**

## **Identified Themes**

### **Cultural Compatibility**

- Lends itself to orally and visually focused cultures of Indigenous communities rather than western-based literacy and numerics
- Indigenous leaders identify the mesh of interactions present in social networks - similar to ancient imagery and ancient communication channels
- Opportunities for transmitting intergenerational knowledge within and between communities
- Allows for continuity, expansion and transformation of traditions (language to activism)
- Provides a broader space to reflect on alternative understandings about what it means to be Indigenous

# 2016: Social media and digital technology use among Indigenous young people in Australia: a literature review.



## Identified Themes

### Community and Family Connections

- Transmit intergenerational knowledge
- Uniting and healing
- Strong cultural identity is linked with greater participation, education and training - a protective factor against self-harm
- Strengthening identity through social media may improve health and educational outcomes
- May encourage young and old Indigenous people to reconnect and understand each other
- Cultural and individual expression shared
- Provided a space for youth to express, inform, a space to reflect and document what is important to themselves

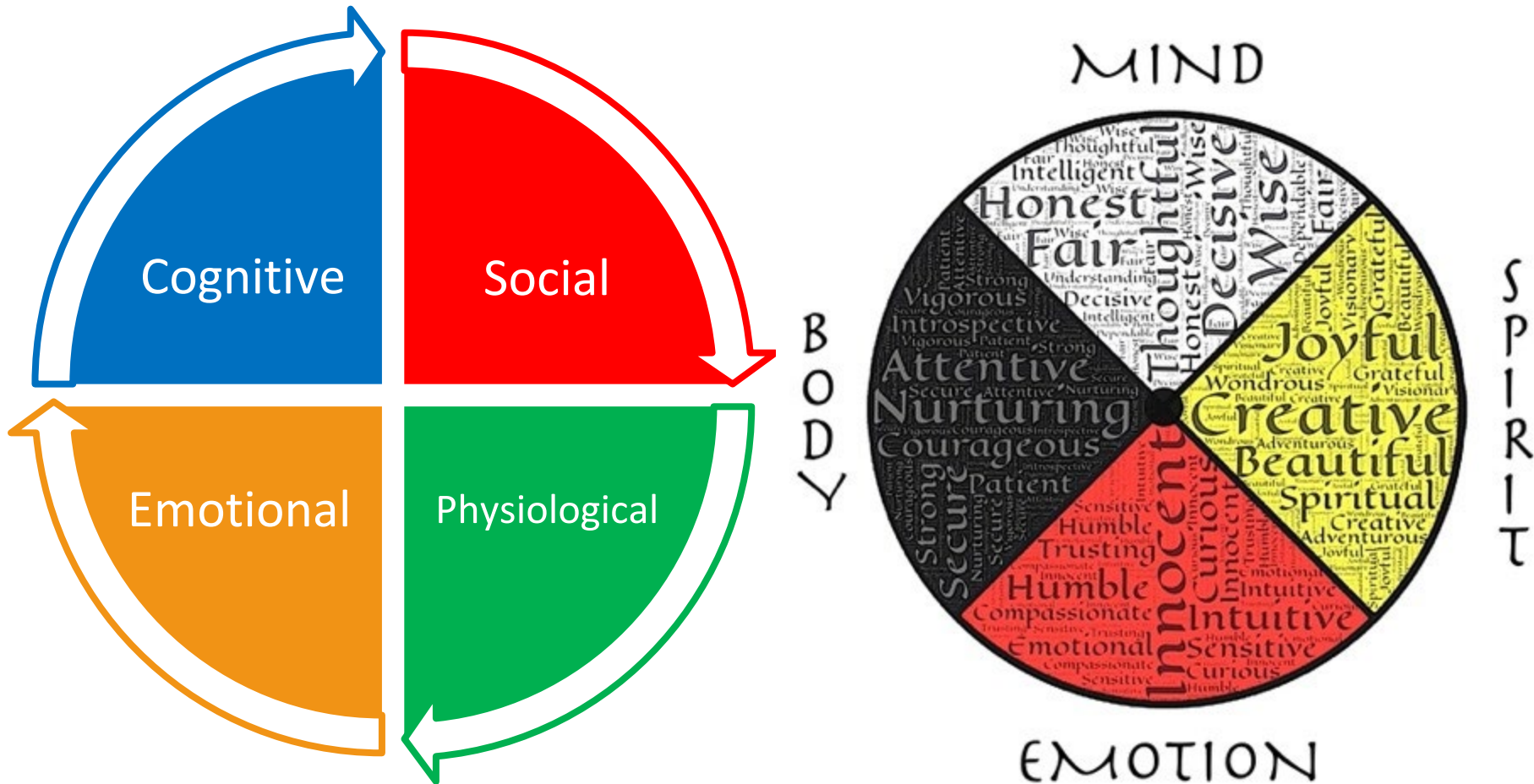


# Addressing Addiction from an Art Therapy/Expressive Arts Approach

- Focus is on all aspects of the Medicine Wheel specifically: identity and identity development and spirituality
- What is out of balance? Access repressed feelings.
- How to address impulsivity - making correlations with spirituality/what is missing
  - Collage: “What does it look like to be your age?”
  - Psychodrama and Family Sculpting
  - Art Therapy Open Studio group work
  - Photography
  - Working with clay: opportunities to encounter constructive and deconstructive parts of the self
  - Build a miniature house: learn about self and addictive family behaviors



# *Bliss Lies in the Balance: Where are You Out of Balance?*



# References

- Barr-Anderson, D., Fulkerson, J.A., Smyth, M. Himes, J.H., Hannan, P.J., Rock, B.H., & Story, M. (2011). Associations of American Indian children's screen time behavior with parental television behavior, parental perceptions of children's screen time, and media-related resources in the home. *Preventing Chronic Disease, 8*(5), 105.
- Hassani, H., Huang, X., & Silva, E. (2021). The Human Digitalisation Journey: Technology First at the Expense of Humans? *Information, 12*(7), 267. MDPI AG. Retrieved from
- Foulds HJ, Rodgers CD, Duncan V, Ferguson LJ. A systematic review and meta-analysis of screen time behaviour among North American indigenous populations. *Obes Rev. 2016 May;17*(5):455-66. doi: 10.1111/obr.12389. Epub 2016 Mar 17. PMID: 26990323.
- Modi, Y.A. & Gandhi, I.S. (2014). Internet sociology: Impact of Facebook addiction on the lifestyle and other recreational activities of the Indian youth. *SHS Web of Conferences, 00001*(1-4).
- Parkhurst, N., Tahy, E., Morris, T. & Mossberger, K. (2015). The Digital Reality: E-government and access to technology and internet for American Indian and Alaska Native populations. *Proceedings of the 16th Annual International Conference on Digital Government Research. 217-229.*
- Rice, E. Haynes, E. Royce, P. & Thompson, S. (2016). Social media and digital technology use among Indigenous young people in Australia: a literature review. *International Journal of Equity in Health, 15*(81).
- Schultz, K., Ivanich, J. D., Whitesell, N. R., Zacher, T. (2023). Tribal reservation adolescent connections study: A study protocol using mixed methods for examining social networks and associated outcomes among American Indian youth on a Northern Plains reservation. *Child Abuse & Neglect, 106*198.
- Soto, C., West, A. E., Ramos, G. G., & Unger, J. B. (2022). Substance and Behavioral Addictions among American Indian and Alaska Native Populations. *International journal of environmental research and public health, 19*(5)

# QUESTIONS/COMMENTS

**Jennifer Clay**: Cultural Consultant  
[jcclay@sdsu.edu](mailto:jcclay@sdsu.edu)

**Mark Chenven**: Medical Director  
[mchenven@vistahill.org](mailto:mchenven@vistahill.org)

**Shawn S. Sidhu**: Associate Medical Director  
[ssidhu@vistahill.org](mailto:ssidhu@vistahill.org)

**Judy Whitcher**: Program Administrator and Lead Clinician  
[jwthicher@vistahill.org](mailto:jwthicher@vistahill.org)

## **Contact Information:**

Call us with questions at **760-427-6427**

[NativeAmerican.SmartCare@VistaHill.org](mailto:NativeAmerican.SmartCare@VistaHill.org)

[NativeAmericanSmartCare.org](http://NativeAmericanSmartCare.org)