Videogame, Social Media and Pornography Addiction: Assessment, Treatment and Prevention

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Technology 1981

IBM PC

1-2 phones
per household

Space Shuttle Launch

Atari 2600 Console

43 Years Later: 2024

Xbox Series X

PS5

iPotty
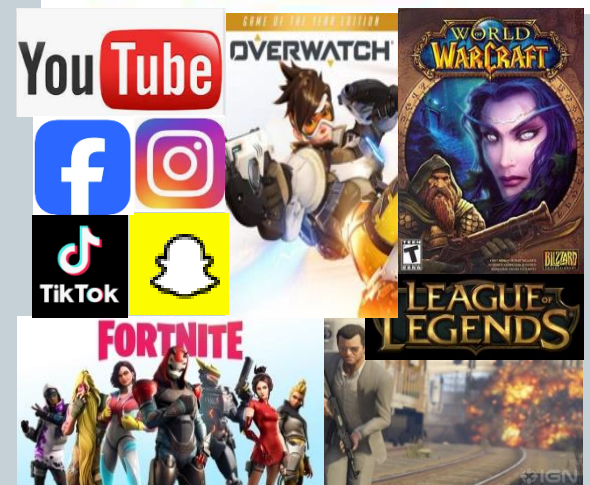
- # 1980s - Anecdotal reports emerging
  - Computer Addiction? Shotton, 1989
    - Surveyed 127 teen/young adult males
    - Looked at all computing activities
    - Multi-user Dungeons and Dragons "...the MUD players hours were perhaps the most disruptive of their family lives than any other group"
- # 1990s Self report surveys
  - Fisher, Griffiths - Prevalence: 6% , 20%
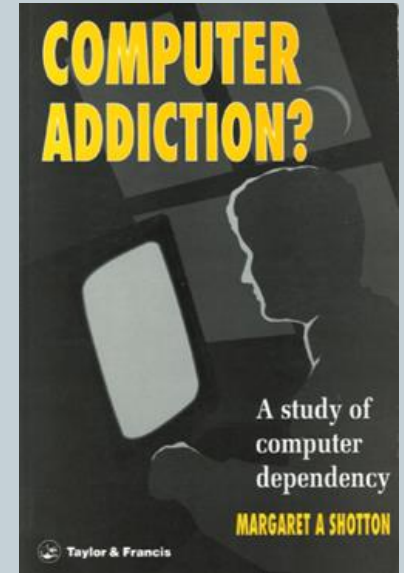
Problematic Uses by Age Group

	Age 11-17	Age 18-25	Age 26+
Games	**41%**	**18%**	**13%**
Chat	**34%**	**21%**	**19%**
Sexual	**25%**	**32%**	**54%**
Online Relations	23%	28%	32%
Web Surfing	11%	12%	13%
Gambling	0%	4%	13%
Shopping	0%	4%	10%
Programming	0%	4%	3%

"Do you believe computer/Internet addiction is a distinct disorder" Woog (2004)

% of respondents

	No	Yes	Can be	Don't Know
Treated prior 12 months	**28**	19	33	20
Not Treated	**44**	15	15	26

Responded "Yes" or "Can be" a distinct disorder:

Treated within past 12 months: 52%
Not treated within past 12 months: 30%

50% knew someone personally with the problem

Reported Successful Treatment Methods
Woog (2004)

- Psychotherapy (CBT) - (45%)
- Family / Marital Counseling (34%)
- Behavior Therapy (33%)
- Medication (32%) 11% respondents were psychiatrists
- Abstinence (18%)
- 12 step programs, on-line, gameaholics anon (18%)
- Controlled Use (moderation) (17%)
- Parent Counseling (15%)
- Social Skills Training (12%)
- Addiction Counseling (11%)
- Control / Monitoring Software - (8%)

Problematic Gaming Research 2000s

- Worldwide Prevalence Research: **2.5-34%**
  - 2005, 2007 Germany Grusser 15+y/o (n>7000) **9.3-11.9%**
  - 2007 S. Korea. Lee & Han 5/6th graders (n=2584) **2.5%**
  - 2007 Taiwan. Wan & Chiou 17-24 y/o (n=416) **34%**
  - 2008 China. Xu & Yuan 13-18 y/o (n=623) **21.5%**
  - 2009 Austria. Battrhyany 13-18 y/o (n=1068) **2.7%**
  - 2009 Holland. Lemmens 12-18 y/o (721) **1.4-9.4%**
  - **2009 US. Gentile 8-18 y/o (1178) 8.5%**
    - **Nationwide Harris Poll Online survey**
      - **Criteria similar to pathological gambling**
      - **Problems correlated to 24 hrs./week of game play**
  - 2010 Australia. Thomas, Porter 14-54 y/o, **5-8%**

DSKNECTD (2013)

Brain Imaging: Internet Addiction

Problematic Gaming Research 2010-2019

- CBT Models of Internet Addiction and Gaming Disorder Emerging
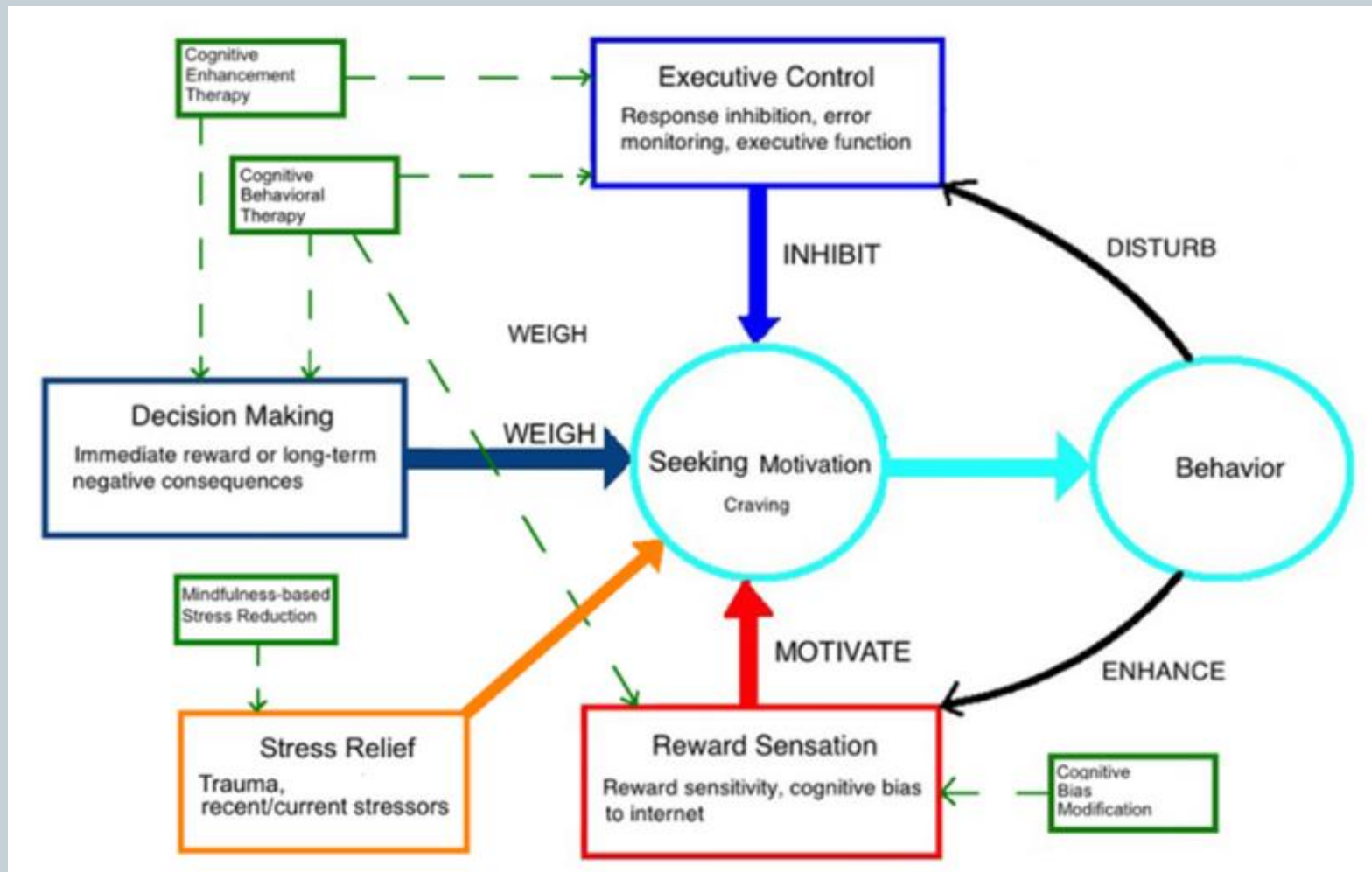
Gaming Disorder ICD-11 (6C51) (2018)
World Health Organization

World Health Organization ICD-11

Addiction Disorders Restructured to Include Behavioral Addictions

- Gambling Disorder 6C50
- Gaming Disorder 6C51

Added to Compulsive Behaviors:

- Compulsive Sexual Behaviour Disorder 6C72

- US has not yet adopted the ICD-11
- APA – DSM-5 No updates

▼ Disorders due to substance use or addictive behaviours
  ▸ Disorders due to substance use
  ▼ Disorders due to addictive behaviours
    ▸ 6C50 Gambling disorder
    ▸ 6C51 Gaming disorder
    6C5Y Other specified disorders due to addictive behaviours
    6C5Z Disorders due to addictive behaviours, unspecified
▼ Impulse control disorders
    6C70 Pyromania
    6C71 Kleptomania
    6C72 Compulsive sexual behaviour disorder
    6C73 Intermittent explosive disorder
  ▸ Substance-induced impulse control disorders
  ▼ 6C50 Gambling disorder
    6C50.0 Gambling disorder, predominantly offline
    6C50.1 Gambling disorder, predominantly online
    6C50.Z Gambling disorder, unspecified
  ▼ 6C51 Gaming disorder
    6C51.0 Gaming disorder, predominantly online
    6C51.1 Gaming disorder, predominantly offline
    6C51.Z Gaming disorder, unspecified

Gaming Disorder ICD-11 (6C51.0)

Gaming disorder is characterized by a pattern of persistent or recurrent gaming behaviour ('digital gaming' or 'video-gaming'), which may be online (i.e., over the internet) or offline, manifested by:

1. **impaired control over gaming** (e.g., onset, frequency, intensity, duration, termination, context);

2. **increasing priority given to gaming** to the extent that gaming **takes precedence over other life interests and daily activities;** and

3. **continuation or escalation of gaming despite the occurrence of negative consequences. The behaviour pattern is of sufficient severity to result in significant impairment** in personal, family, social, educational, occupational or other important areas of functioning.

The pattern of gaming behaviour may be continuous or episodic and recurrent. The gaming behaviour and other features are **normally evident over a period of at least 12 months** in order for a diagnosis to be assigned, although the required duration may be shortened if all diagnostic requirements are met and symptoms are severe.

Replace the word "Gaming" with "Gambling for Gambling Disorder criteria

Social Media Research

- **1980's – No research**
  - Chat and messaging in infancy
- **1990's – 2009 "Internet Addiction"**
  - Captured essence of many different applications of Social Networking
  - Emerging awareness of problems related to Social Media
    - FOMO, body image issues
- **2010's – Social Networking Site (SNS) Addiction**
  - 2011 – First published literature review of SNS Addiction
    - Prevalence surveys conflicting, poor sampling: 1-2% US adults
- **2020's – Narrowing in on the Negative Impact**
  - Growing excess use of social networking

Hooked on Facebook:

The Role of Social Anxiety and Need for Social

Assurance in Problematic Use of Facebook

Roselyn J. Lee-Won, PhD, Leo Herzog, BA, and Sung Gwan Park, PhD (2015)

Cyberbullying, Depression, and Problem Alcohol

Use in Female College Students: A Multisite Study

Ellen M. Selkie, MD, MPH, Rajitha Kota, MPH, Ya-Fen Chan, PhD,
and Megan Moreno, MD, MSEd, MPH (2015)

Exploring the Role of Parents and Peers in Young Adolescents'

Risk Taking on Social Networking Sites

Wonsun Shin, PhD, and Nurzali Ismail, ME (2014)

Instagram #Instasad?: Exploring Associations Among

Instagram Use, Depressive Symptoms, Negative

Social Comparison, and Strangers Followed

Katerina Lup, MA, Leora Trub, PhD, and Lisa Rosenthal, PhD (2015)

Social Media Research

The Facebook Experiment: Quitting Facebook Leads to Higher Levels of Well-Being

Tromholt M., Cyberpsychology, behavior and social networking, 19(11), 661–666. https://doi.org/10.1089/cyber.2016.0259 (2016)

Prolonged Mobile Phone Use Is Associated with Poor Academic Performance in Adolescents

Xianchen Liu, MD, PhD,1 Yachen Luo, MS,2 Zhen-Zhen Liu, MD, Yanyun Yang, PhD, Jianghong Liu, PhD, and Cun-Xian Jia, PhD (2020)

Prevalence of Social Media Addiction Across 32 Nations: Meta-analysis With Subgroup Analysis of Classification Schemes and Cultural Values.

Cecilia Cheng,*, Yan-ching Lau, Linus Chan, Jeremy W. Luk (2021)

Prevalence of Social Media Addiction Across 32 Nations (2021)

Geographical region[c]	k	Prevalence	95% CI Lower	95% CI Upper
North America	9	15%	7%	26%
Western/Northern Europe	6	8%	4%	12%
Eastern/Southern Europe	5	20%	13%	28%
Asia	24	31%	25%	38%
Middle East	11	29%	17%	44%
Africa	5	37%	26%	48%
Latin/South America	2	18%	8%	30%

The results of random-effects meta-analysis revealed a pooled social media addiction prevalence of 24% (95% CI = 21%-28%, Q = 4007.88, $p < .0001$, I^2 = 98%). The prevalence estimates ranged from 0% to 82%.

Association of Habitual Checking Behaviors on Social Media With Longitudinal Functional Brain Development

Maria T. Maza, BS; Kara A. Fox, MA; Seh-Joo Kwon, BS (2023)

Associations of Active and Passive Smartphone Use With Measures of Youth Mental Health During the COVID-19 Pandemic

Silvia Marin-Dragu, Alyssa Forbes, Sana Sheikh, Ravishankar Subramani Iyer , Davi Pereira dos Santos , Martin Alda , Tomas Hajek , Rudolf Uher, Lori Wozney, Fernando V. Paulovich , Leslie Anne Campbell , Igor Yakovenko , Sherry H. Stewart, Penny Corkum, Alexa Bagnell, Rita Orji, Sandra Meier (2023)

The Effect of Self-Monitoring Limited Social Media Use on Psychological Well-Being

Faulhaber, M. E., Lee, J. E., & Gentile, D. A. (2023).

Examining Neural Reactivity to Gambling Cues in the Age of Online Betting

Damien Brevers, Guillaume Sescousse, Pierre Maurage, Joël Billieux (2019)

Sexual Incentive Delay in the Scanner: Sexual Cue and Reward Processing, and Links to Problematic Porn Consumption and Sexual Motivation

Charlotte Markert, Sanja Klein, Jana Strahler, Onno Kruse, Rudolf Stark (2021).

Screen Time Research Summary 2024

- **Gaming Disorder**
  - Gaming Disorder has been researched more and longer
  - Predicts increased Depression and Anxiety (males)
  - Gaming Disorder is a defined Mental Disorder in the ICD-11
  - China/South Korea (15%), US – likely 3-8%
  - Negative life outcomes correlate to >25 hours /week
- **Social Networking excesses lead to problems:**
  - Social Networking Addiction Research Still Limited
  - Elevated risk of depression, anxiety, body image issues, cyber bullying and lowered self-esteem:
    - 3 hours/day = 2x the risk
  - Reduction to 30 minutes/day suggests greater wellbeing in adults
  - Studies indicate type of use important as amount of time not predictor of symptom severity
    - Passive use (swiping, not posting) higher risk than active
  - US prevalence significant 15%
- **On-line Gambling**
  - Lots of research for decades
  - Online and legalization has made it a more serious problem
- **On-line Porn Issues**
  - Least studied – tricky subject

Bottom Line: Is Screen Time Beneficial?

Only to a point - then it is all downhill from there on
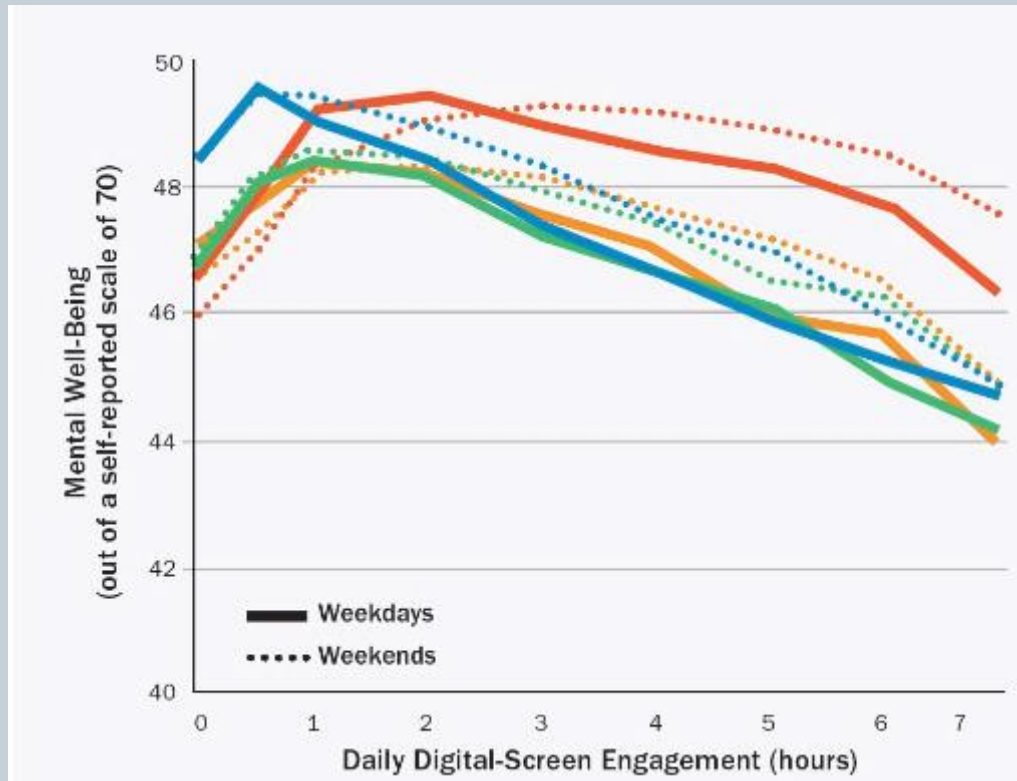
Source: "A Large-Scale Test of the Goldilocks Hypothesis: Quantifying the Relations Between Digital-Screen Use and the Mental Well-Being of Adolescents," by Andrew K. Przybylski and Netta Weinstein, in *Psychological Science*, Vol. 28, No. 2; January 13, 2017

- Up to 95% of youth ages 13–17 report using social media

  - 1/3 use "constantly"

- 40% of children ages 8–12 use social media

  - Technically not allowed until age 13

- Adolescent social media use is predictive of a subsequent decrease in life satisfaction:

  - Girls 11–13 years old and boys 14–15 years old.

- 3 hours per day on social media faced double the risk of experiencing poor mental health outcomes including symptoms of depression and anxiety (age 12-15)

- As of 2021, 8th and 10th graders now spend an average of 3.5 hours per day on social media

- Limits on the use of social media have resulted in mental health benefits for young adults and adults

Social Media and Youth Mental Health

The U.S. Surgeon General's Advisory
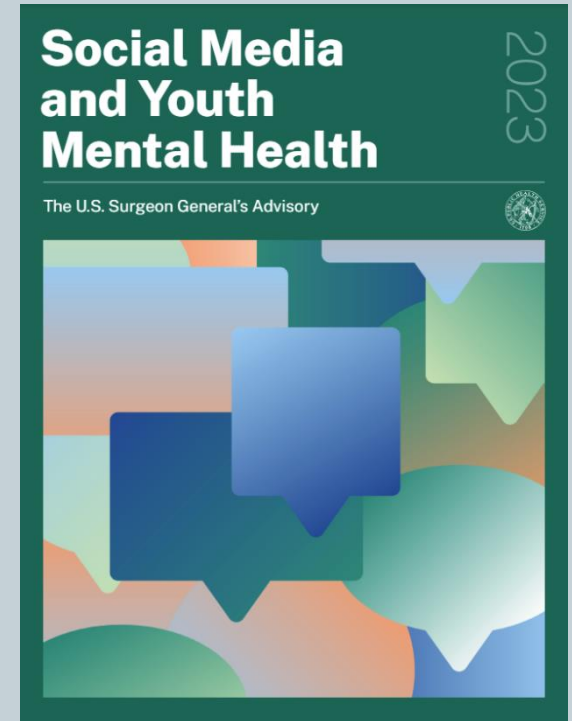
2023

Massive Video Gaming Industry

- **$250B in 2023**
  - **Growing at 9-18% annually, huge growth in mobile gaming**
  - **63% increase in video game sales during pandemic**

Total Worldwide Online Software Sales for Interactive Entertainment Industry: 2011-2023
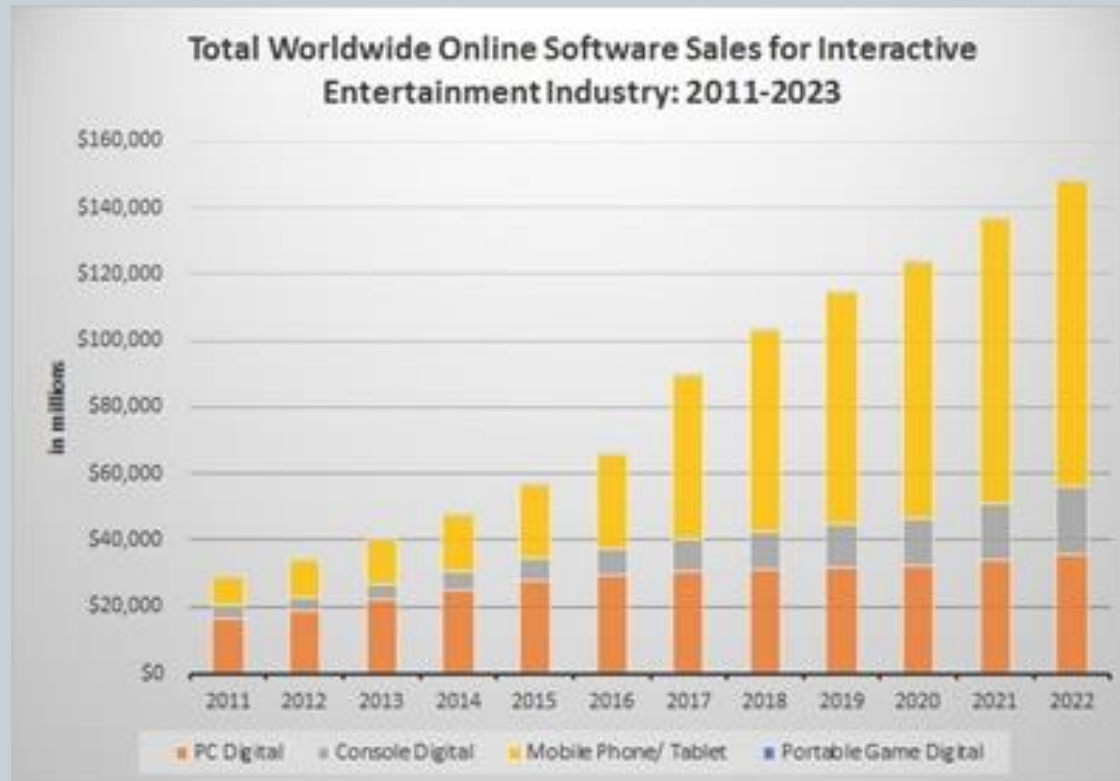
DFC Intelligence 2019

Advertising and Social Networking

SmartInsights.com (2023)

The Social Dilemma (2020)

Online Porn Growing Fast

- ## Porn Initially the Largest Use of the Internet Data
  - It was a major impact on the growth of video streaming
  - Today it is estimated between 10 and 30% of all internet traffic
  - $100B Annual revenue (Bedbible.com)

Porn industry revenue (2000 – 2030)
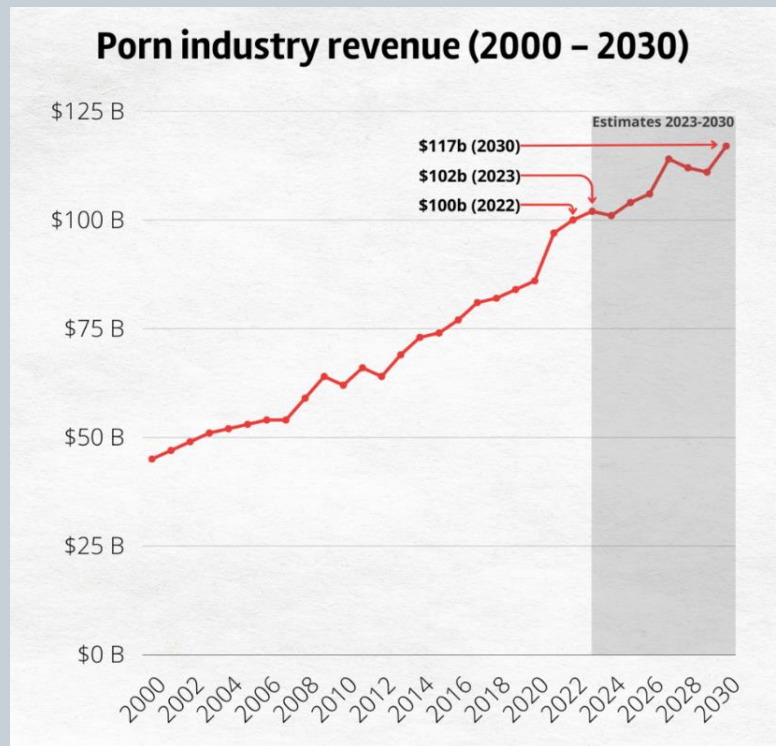
Online Gambling

- ## Online Gambling is Continuing to Grow
  - $100B in Annual Revenue est. for 2024 (statista.com)

REVENUE   REVENUE CHANGE
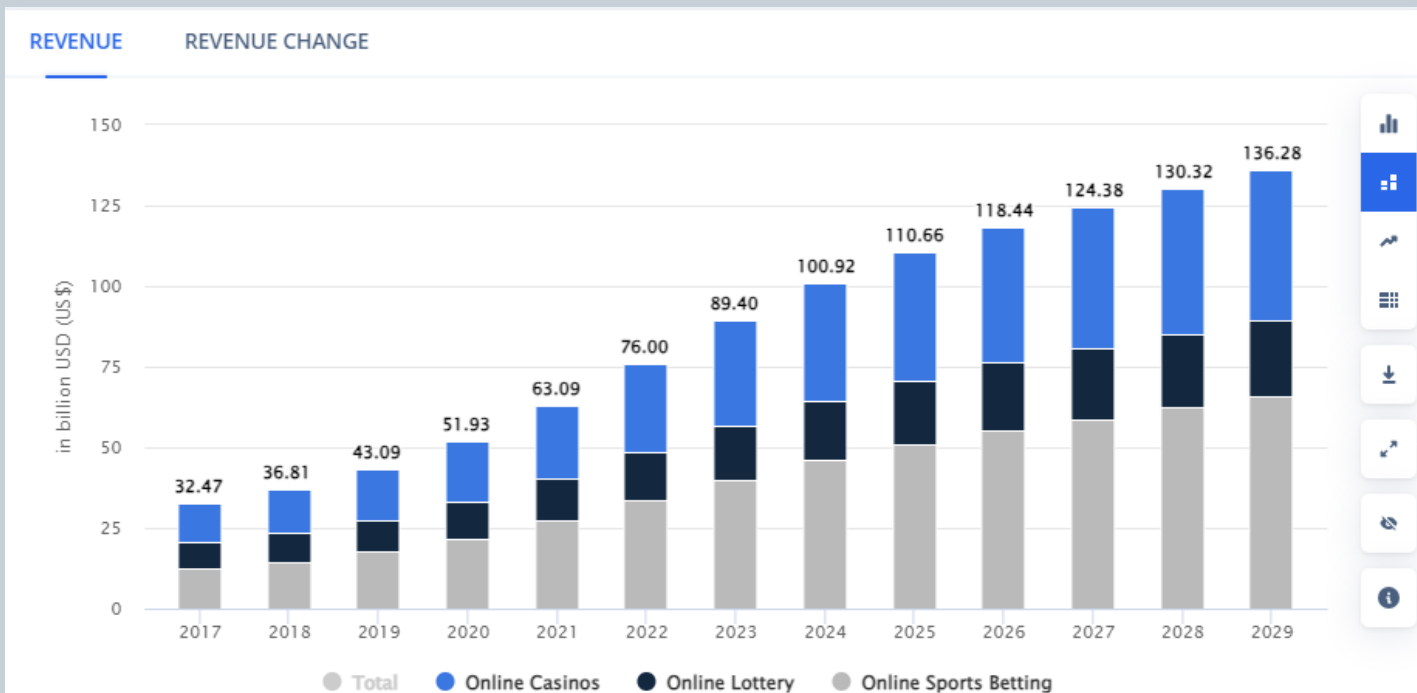
Notes: Data reflects market impacts of the Russia-Ukraine war.

Most recent update: Mar 2024

Source: Statista Market Insights

The "Simplified" Science of Addiction

Brain reward (dopamine) pathways

Frontal Cortex

Ventral Tegmental Area

Nucleus Accumbens
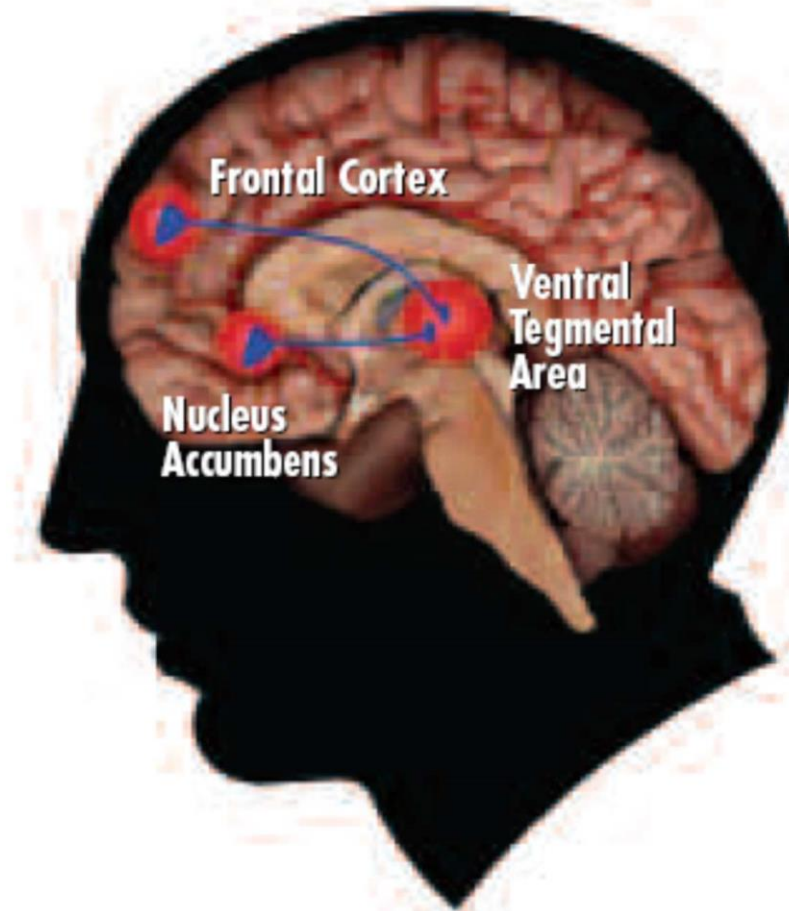
These brain circuits are important for natural rewards such as food, music, and art.

Sufficient Activation Results in Addiction

Brain reward (dopamine) pathways
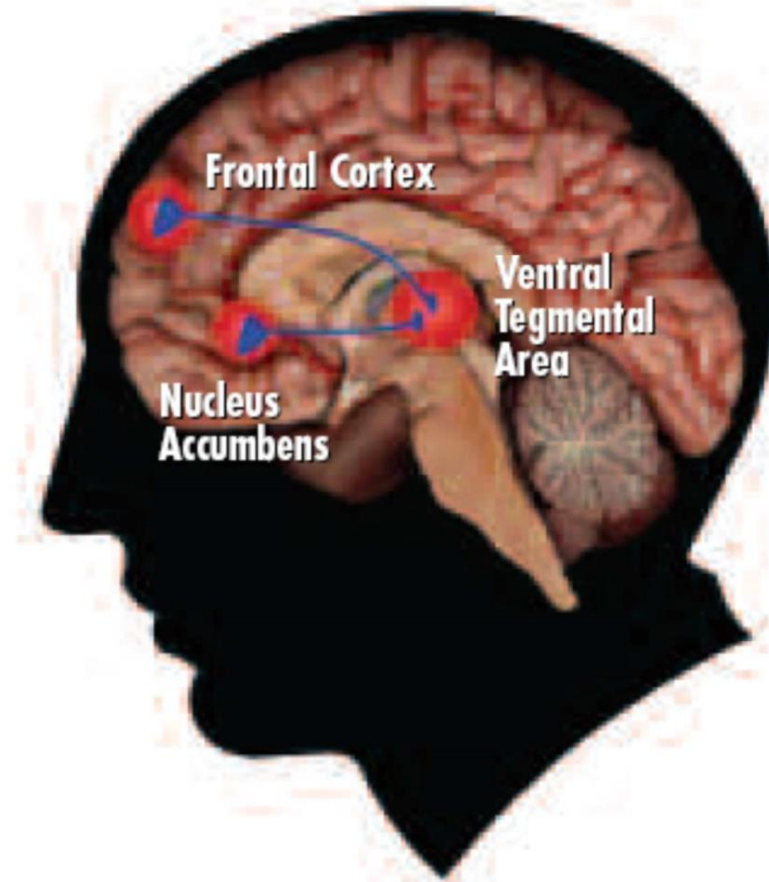
These brain circuits are important for natural rewards such as food, music, and art.

What is Addiction? (Simplified)

- Excess reward pathway activation
  - Altered brain wiring associating the addicting substance or behavior with pleasure
  - The amount of the brain wiring makes it dominant
  - Cues in environment trigger reward pathway involvement
- Brain changes that result in behavioral deficits:
  - Behavioral inhibition, impulsivity
  - Decision making difficulties
- The bad news: The brain wiring does not go away
  - Learning theory
- The good news: New wiring can mediate old wiring
  - New Learning

What is Dependence? (Simplified)

- Dependence is experiencing withdrawal symptoms, (negative feelings) upon discontinuing an addictive substance or behavior

- The negative feelings associated with withdrawal are thought to come from two sources:
  - Diminished activation in the reward circuitry of the basal ganglia and
  - Activation of the brain's stress systems in the extended amygdala.
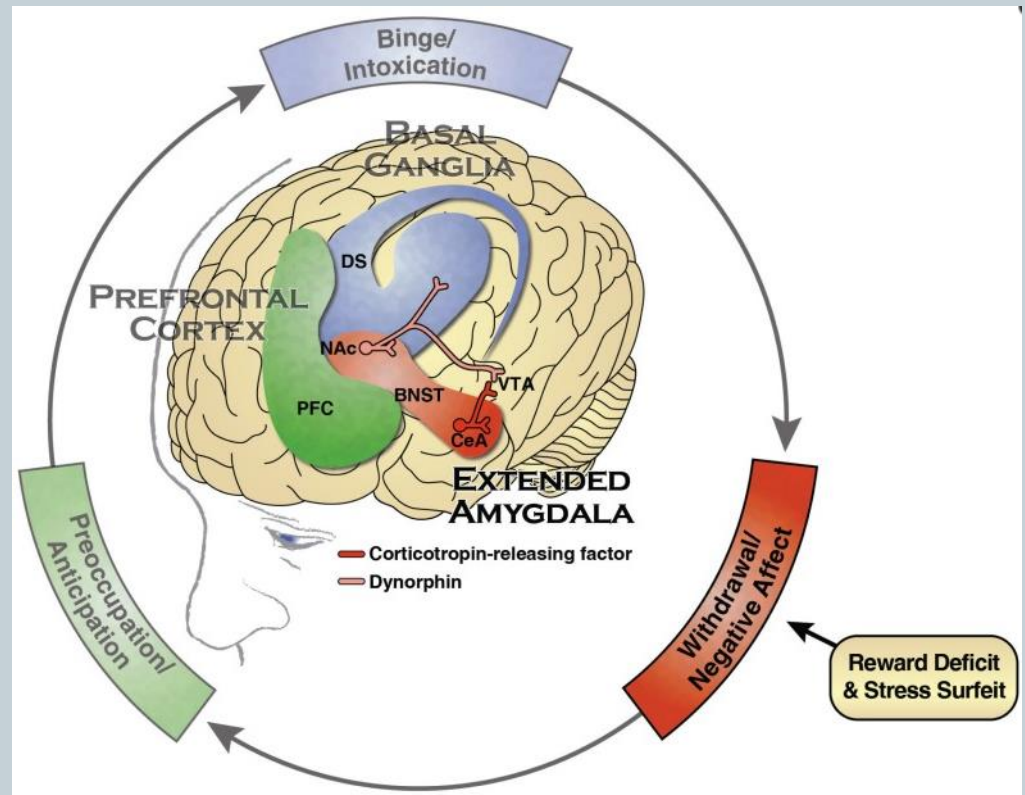
Dependency and Addiction are Different
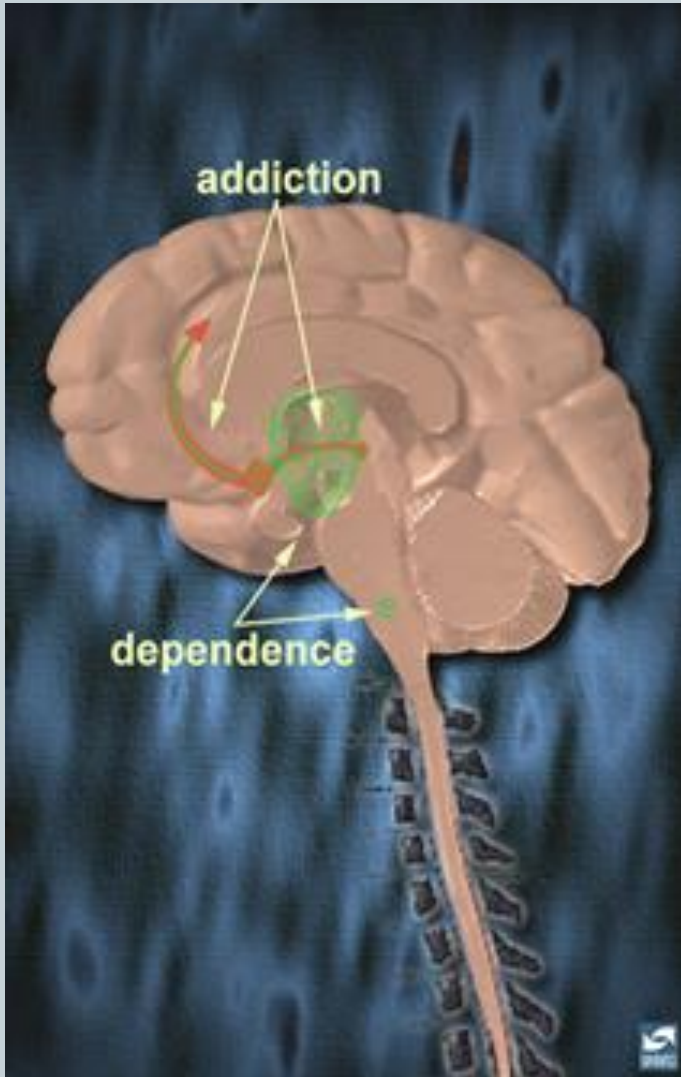
Addiction is a state where the dopaminergic reward pathways have been stimulated by a substance or behavior to a degree that it causes the organism to engage in the behavior or use of the substance and is ultimately unable to limit such behavior or substance despite resulting in negative consequences. *In a sense - unconscious processes stimulate cravings, urges and reduce inhibition.*

Dependence is the need to intake a substance or engage in a behavior in order to maintain an adaptive emotional state. Symptoms of negative mood states will result from discontinuance of the substance or behavior. *This is different than the chemical effects of withdrawal.*

One More Important Result of Overuse

Video to follow discusses cocaine but applies equally to all addictive substances or behaviors

Real-life Rewards Fade to Gray
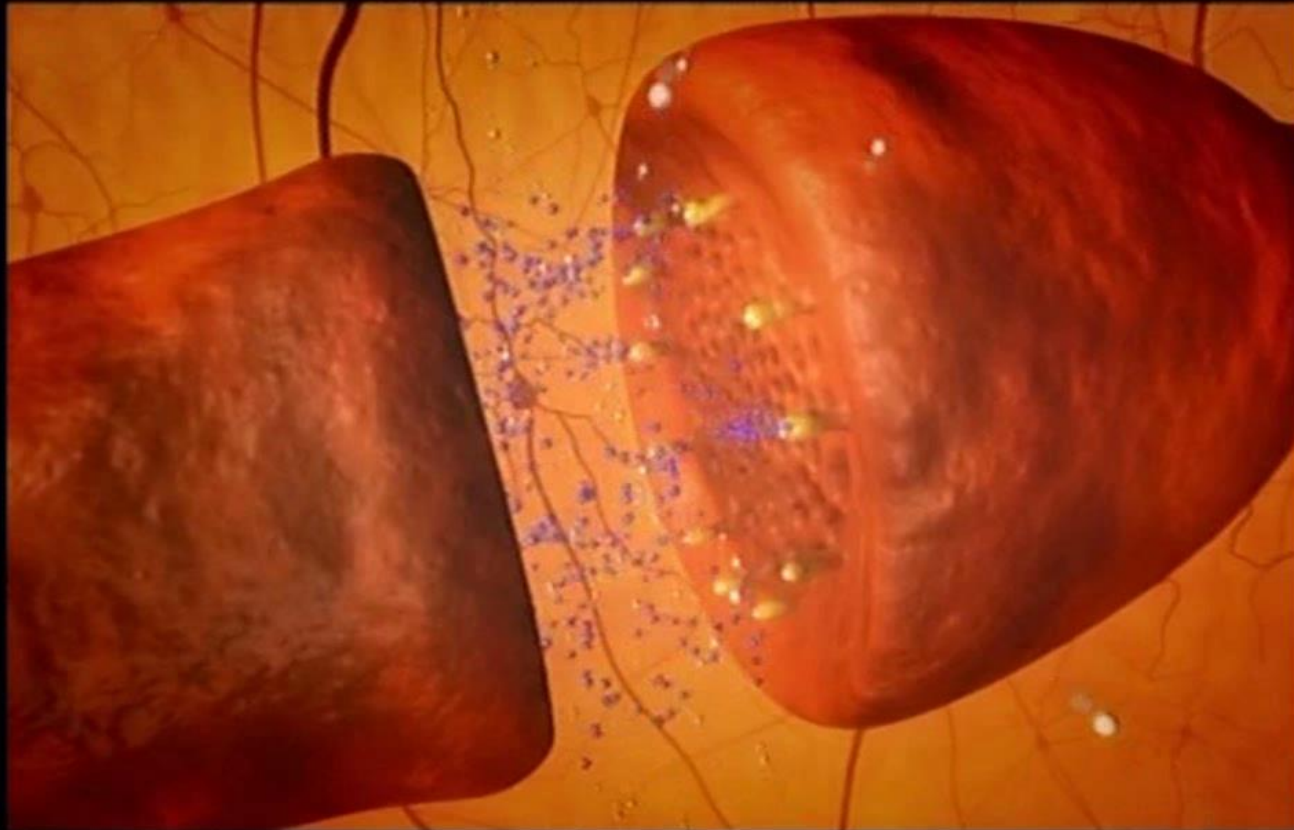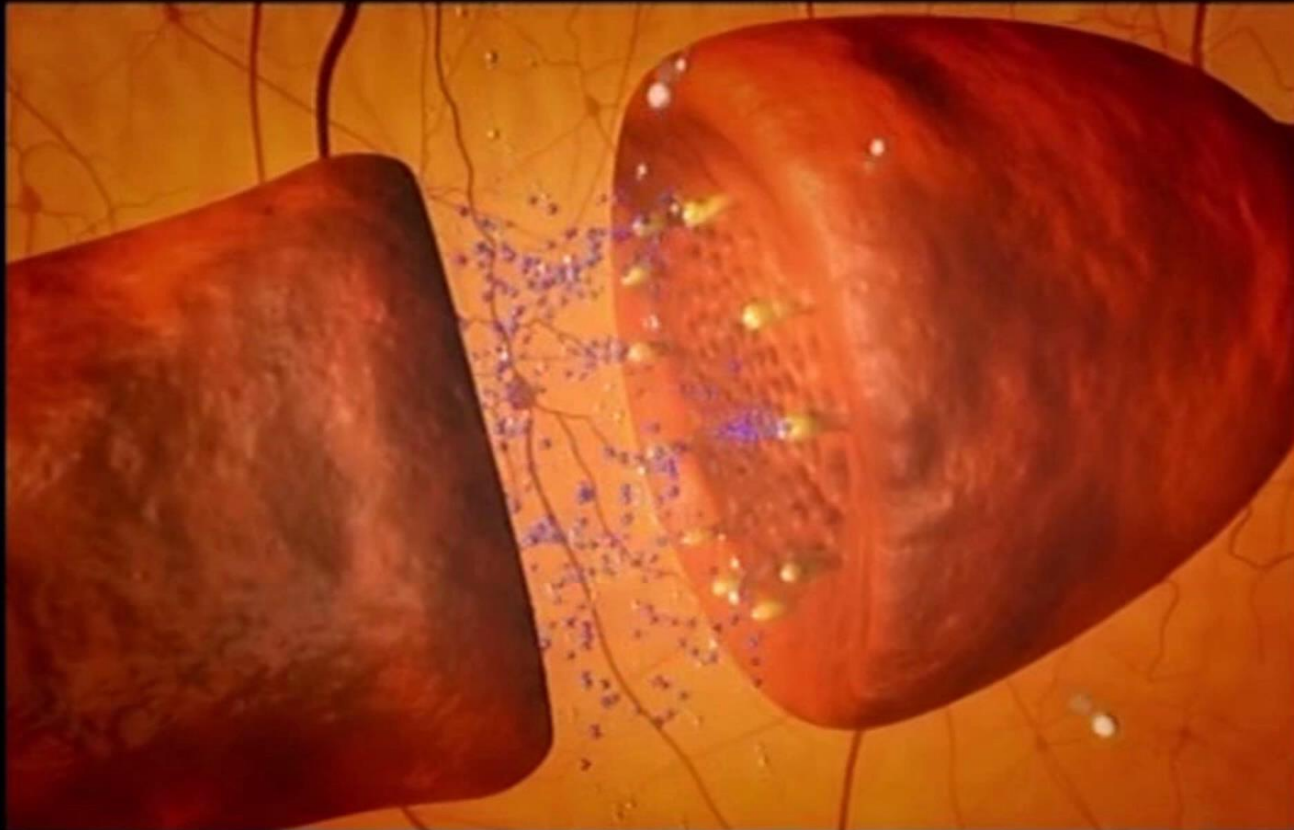
The Secret Life of the Brain © 2001 PBS All rights reserved Reproduced under Fair Use (Title 17: Chapter 1 § 107)

Range of Pleasure Perception Narrows

(conceptual)
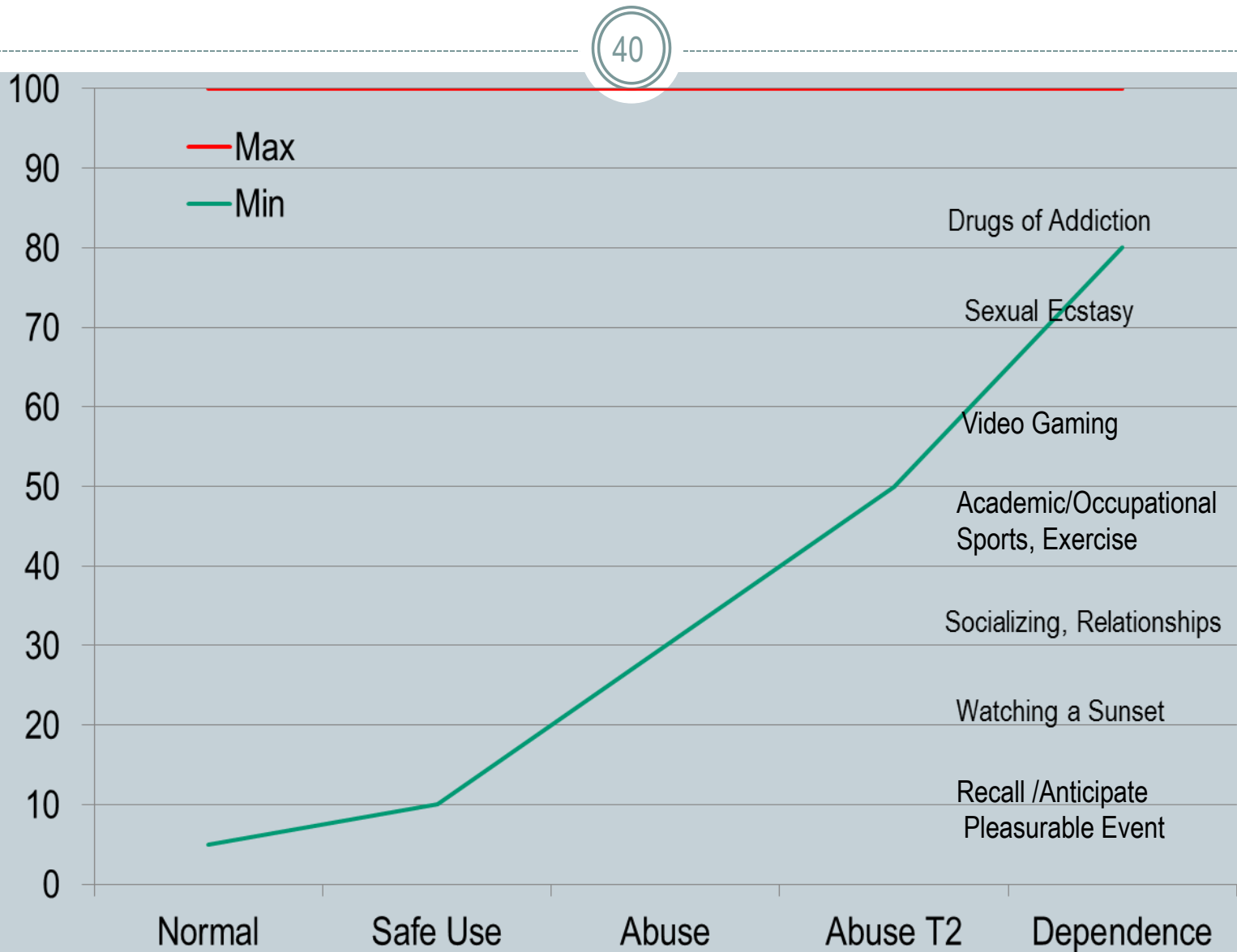
What is a Safe Level Video Gaming?
What is not safe…

- No single number - Varies individual to individual
    - Genetic/individual variability, life circumstances
- Impairment above 15 hours/week
    - Time includes all related activities – Twitch, YouTube, Discord
- Significant impairment found at 25 hours/week
- Safe does not mean appropriate for lifestyle / commitments
    - College, high school students, athletes, parent, spouse
- Never binge for more than 5 hours in any one day!

Little Impairment	Mild Impairment	Modest Impairment	Serious Impairment
Not dependent		Likely dependent	Dependent

5   15   25   35   45   55   65 hrs/week
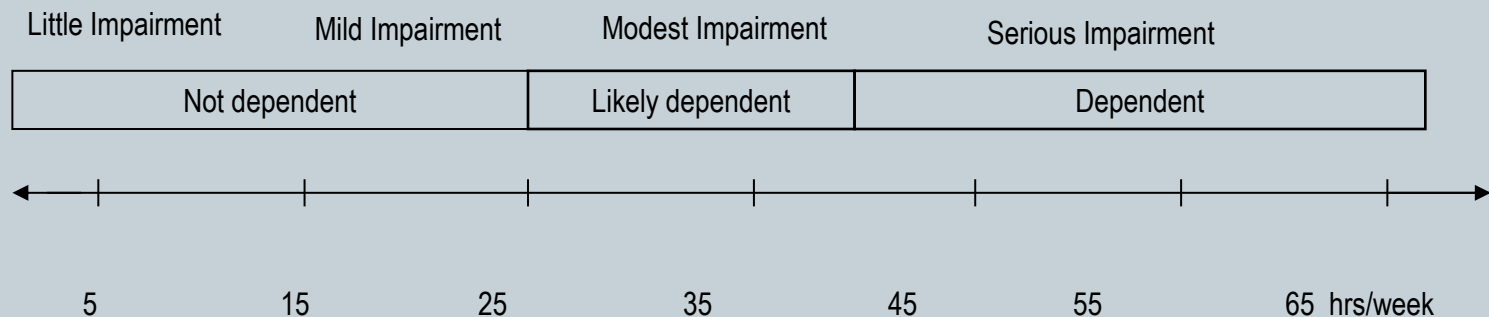
We Need a Simplified Model

- ## Informs assessment
  - Assessment focused on causes (i.e. excess use), reinforced problematic behavior and current client functioning
- ## Informs treatment
  - Interventions apply to specific processes and deficits
- ## Educates client and families
  - Externalizes the problem and its causes. Addiction result is normal.
    - Lack of ability to limit use IS the disorder, not a moral failing
  - Rationale for interventions that non-professionals can understand
  - Explains why certain parenting interventions not helpful
  - Increases empathy for client struggling with the disorder
  - Helps create realistic expectations for treatment and outcome
  - Helps define the "end" of treatment
- ## Integrates both Addiction and Dependency
  - Understandable and acceptable
- ## Informs prevention

Depressive Symptoms and Problematic Internet Use Among Adolescents: Analysis of the Longitudinal Relationships from the Cognitive–Behavioral Model Manuel Gamez-Guadix, PhD (2014)
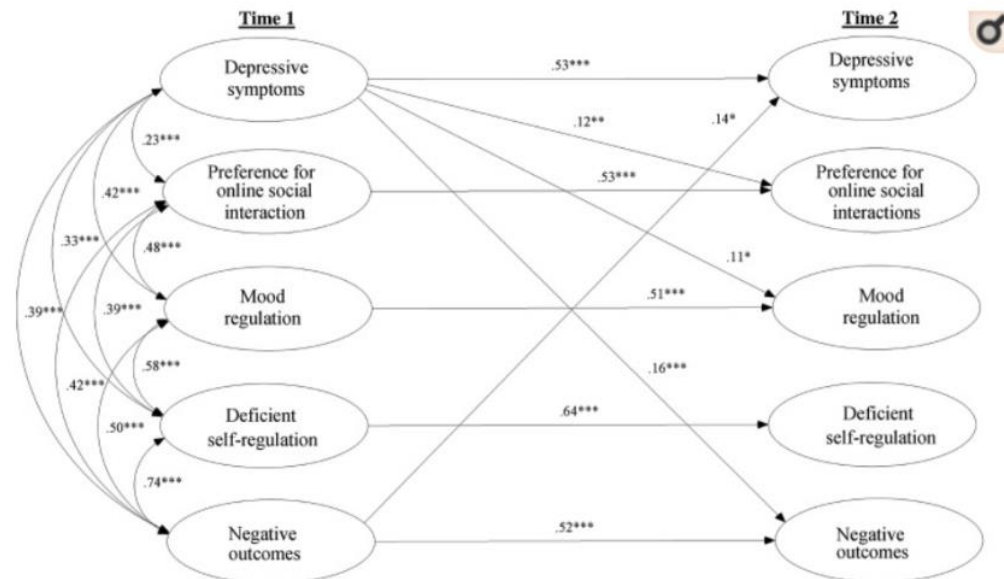
Note. *p < .05; **p < .01; ***p < .001. χ^2 (371, N = 699) = 956.41, NNFI = .92, CFI = .93, SRMR = .076, RMSEA = .048 (90% CI: .044; .51).

- *Negative outcomes at an academic, family or social level due to problematic internet use predicted increase in depression symptoms 1 year later*
- *Depressive symptoms at time 1 predicted problematic internet use with negative outcomes one year later*

Simplified Dependency Model

1 → Negative Mood States (Anxiety, Depression, Boredom)

Boredom, frustration, anxiety, depression, sadness, overwhelm dread, confusion

2 → Unsafe use of Reinforcing Substance or Behavior

Videogames, social media, video watching, online porn, online gambling

Negative Real-life Outcomes

Physical health problems: obesity, repetitive stress injuries, sleep deprivation.
Mental health issues: depression, anxiety, lowered self-esteem.
Declining academics, occupational problems, relationship issues

Simplified Addiction Model

Initiate Play → **Game Play**

Game Play → **Reward Pathway Conditioning & Structural Changes**

After sufficient play, reward pathway is hijacked and structural brain changes lead to reduced coping and self regulation functioning

Reward Pathway Conditioning & Structural Changes → **Cue-reactive craving with reduced behavioral inhibition**

Cues → **Cue-reactive craving with reduced behavioral inhibition** → Game Play

Addiction Model Treatment Targets

Initiate Play → **Game Play**

Game Play ↓ **Reward Pathway Conditioning & Structural Changes**

↓ **Cue-reactive craving with reduced behavioral inhibition** ← Cues

Decrease consumption levels, Increase competing activities: Sports, academics, off-line socializing, family involvement

Decrease rewards directly via reduced use (loot, ranking, likes), punish use through less desired contingencies. Reduced use time over extended period to restore structural deficits

Limit access (strongly enforced) (ERP), Mindfulness based cognitive psychotherapy. Medications an option to reduce craving, mood disturbance and impulsivity

Premack Principle (aka Grandma's Rule)

To increase the frequency of a less preferred activity, a more preferred activity is made contingent upon the occurrence of the less preferred activity.

But less known relationship: This contingency will also <u>decrease</u> the frequency of the more preferred activity.

Videogame play causes Homework behavior to increase **BUT as importantly in this case** <u>Motivation for Videogame Play is reduced</u>

Less Preferred Activity (Homework)	+
More Preferred Activity (Videogame Play)	−
Contingency Established	

Integrative Multi-Modal Treatment Model

Gaming Dependence Cycle Treatment Targets

1 → **Negative Mood States**

Physical activity, diet, adequate sleep, other leisure activities, psychotherapy, medication

2 → **Excess Gaming**

Consistent daily usage limits to "safe" levels, relevant contingencies

Negative Real-life Outcomes

Enrichment activities (work, school, social), Family Involvement, Career/Academic Assessment

+
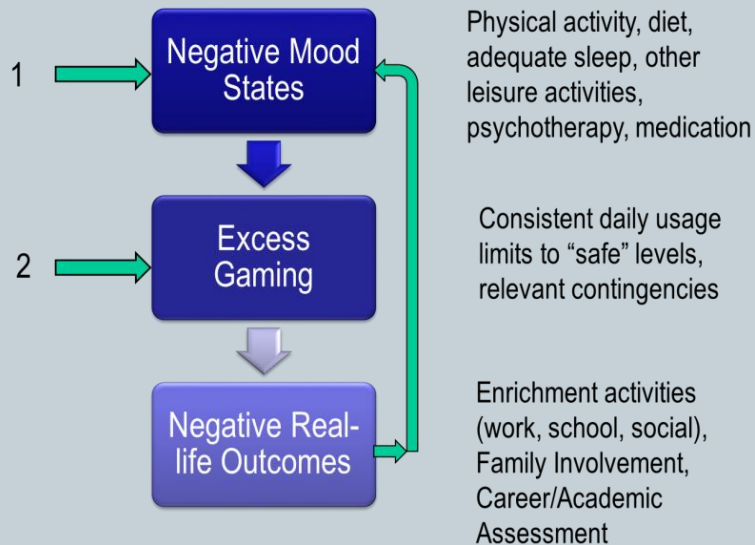
Gaming Addiction Treatment Targets

Initiate Play → **Game Play**

Decrease consumption levels, Increase competing activities: Sports, academics, off-line socializing, family involvement

Reward Pathway Conditioning & Structural Changes

Decrease game rewards directly via reduced play outcomes (loot, ranking, team ranking), punish play through less desired contingencies, interrupted play and team displacement. Reduced play time over extended period to restore structural deficits

Cues → **Cue-reactive craving with reduced behavioral inhibition**

Limit access (strongly enforced) to play/pseudo-play (ERP), Mindfulness based cognitive psychotherapy. Medications an option to reduce craving, mood disturbance and impulsivity

Unified Model Based On Dependency

1 → Negative Mood States (Anxiety, Depression, Boredom)

↓

2 → Unsafe use of Reinforcing Substance or Behavior

↓

Negative Real-life Outcomes
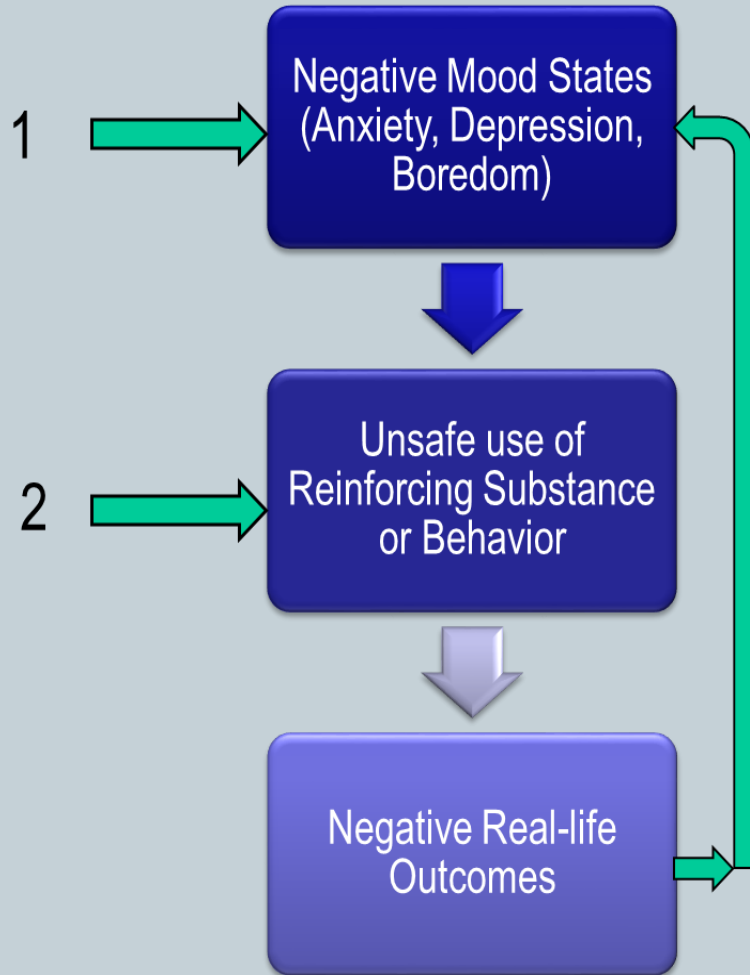
Mindfulness based cognitive psychotherapy. Medication an option to reduce craving, mood disturbance and impulsivity. Lifestyle changes to improve diet, exercise, sleep hygiene and routine.

Decrease consumption levels by increasing competing activities: sports, academics, employment, off-line entertainment, socializing and family involvement. Set contingencies on use and strictly enforce limits. Provide use accountability.

Reduced use time over time to restore neural structural deficits. Additional time spent on other enriching activities serving to create new reward center learning and improve mood. Career assessment, family/couples counseling to reverse effects and give direction and instill hope.

Computer Addiction Treatment Program

2017 dates for our Mountain Retreat are now open! Call 888-452-1869 for availability.

Computer Addiction Treatment Program
Orange County • San Diego • Los Angeles

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Get back in the game of life.

Computer, Internet, and Video Game Addiction Treatment

Are you or a loved one suffering from an unhealthy addiction to technology?

Let us help. While we can't reclaim the time lost to computer excesses, we can help you move forward toward a richer, fuller life. Our treatment and intensive outpatient programs guide you back towards a life consistent with your valued relationships, education, career, health, and personal/spiritual growth.

LEARN ABOUT OUR TREATMENT PROGRAM

Outpatient Treatment – Lake Forest, California
- Psychotherapy and parent coaching

Inpatient Adult Residential – Big Bear, California
- 4 day Retreat, screen detox and kick-start treatment

Three Interventions Elements
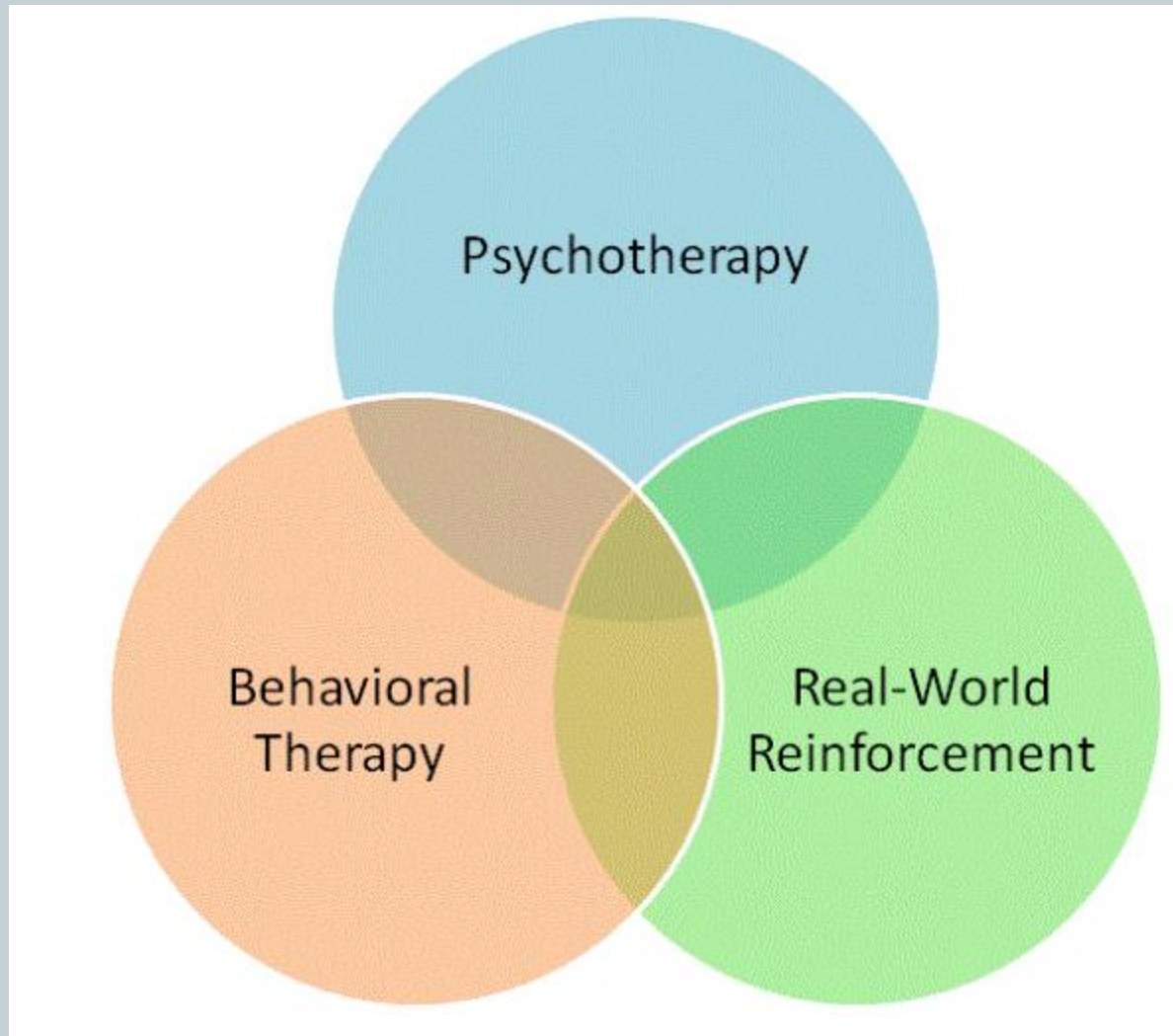
Psychotherapy: Skills Building
Acceptance and Commitment Therapy

CONTACT WITH THE PRESENT MOMENT
Be Here Now

Being present: Not tuning out the world to escape my pain and life circumstances

Willingness to have difficult internal experiences if it's important

ACCEPTANCE
Open Up

VALUES
Know What Matters

What is important for my future? Career, relationships, hobbies, interests?

PSYCHOLOGICAL FLEXIBILITY
Be present, open up, and do what matters

DEFUSION
Watch Your Thinking

COMMITTED ACTION
Do What It Takes

Goal setting, organizing life, doing what you commit to

Awareness of my thoughts: are they helpful or giving me short term relief?
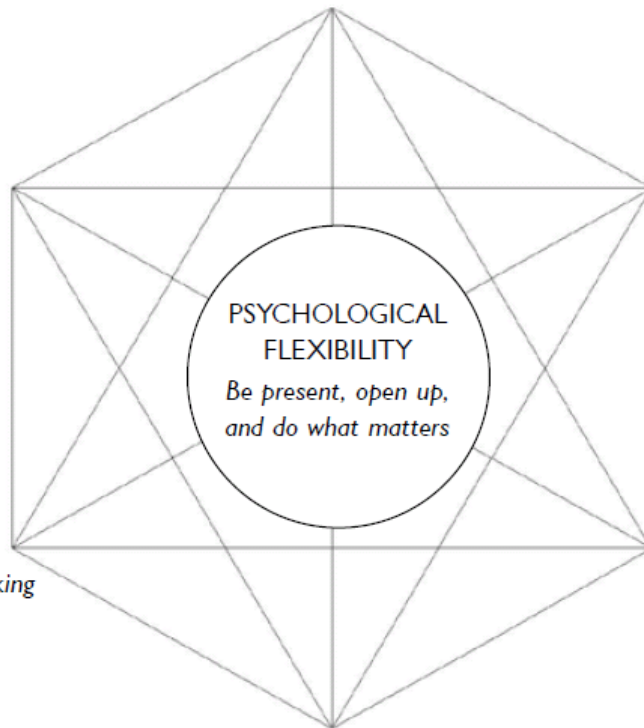
SELF-AS-CONTEXT
Pure Awareness

Gaining self-awareness. Don't believe the stories

Figure 1.1 **The ACT Hexaflex**
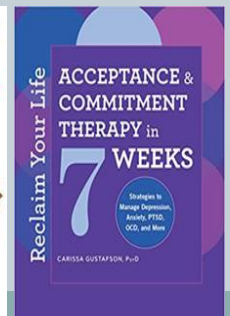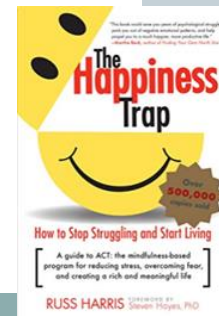
Recommended Changes to Balance Life's Rewards For

_____

| TV, Internet and Computer/ Video Gaming | | Real-life rewards |

List Media Interests

- Videogaming
- YouTube
- Twitch
- Discord
- Netflix

Key:
+ increase
- decrease
x remove
* no change

- + Academics / Education
- __ Athletics / Exercise
- + Career Goals and Success
- + Close Friendships
- __ Family Relationships
- __ Financial Success
- __ Other Hobbies and Interests
- __ Romantic Relationships
- __ Spirituality / Philosophy
- __ Travel

Week of: September 4 — Set the starting date in cell C2. Rows 3 and 4 will automatically update with the correct dates and days of the week.

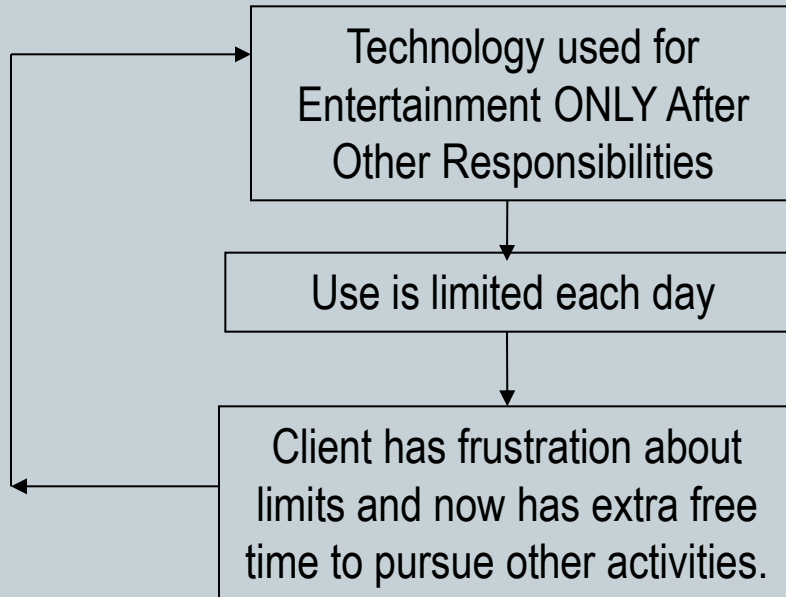|	9/4 MONDAY	9/5 TUESDAY	9/6 WEDNESDAY	9/7 THURSDAY	9/8 FRIDAY	9/9 SATURDAY	9/10 SUNDAY
6:00 AM							
6:30 AM							
7:00 AM	7:00 AM Wake up Morning Chores	7:00 AM Wake up Morning Chores	7:00 AM Wake up Morning Chores	7:00 AM Wake up Morning Chores	7:00 AM Wake up Morning Chores		7:00 AM Wake up Morning Chores
7:30 AM						Wake up Morning Chores	Work Starts
8:00 AM	8:20 Leave Home	8:20 Leave Home	8:20 Leave Home	8:20 Leave Home	Morning Walk	Walk with Dad	
8:30 AM	8:50 Arrive at School	8:50 Arrive at School	8:50 Arrive at School	8:50 Arrive at School			
9:00 AM	Economics Class	Math Class	Economics Class	Math Class	Chores: Wash Car	Breakfast	
9:30 AM						Study (2.5 hrs)	
10:00 AM					Study Time (2.5 hrs)		
10:30 AM	10:50 Class Ends	10:50 Class Ends	10:50 Class Ends	10:50 Class Ends			
11:00 AM	Lunch Break	Drive Home	Lunch Break	Drive Home			
11:30 AM	Study Time (1 hr.)	Lunch	Study Time (1 hr.)	Lunch			
12:00 PM		Study Time (2 hrs)		Study Time (2 hrs)		Lunch	
12:30 PM	Music Class		Music Class		Lunch	Chores	
1:00 PM					Study Time		
1:30 PM	1:45 pm Class Ends		1:45 pm Class Ends				
2:00 PM	Drive Home 2:15 Arrive Home	2:20 PM Leave for School	Drive Home 2:15 Arrive Home	2:20 PM Leave for School		Study (4.5 hrs.)	Work Ends Return Home
2:30 PM	Study Time (2 hrs)		Study Time (4 hrs)		Gaming Time		Study Time (2.5 hrs.)
3:00 PM		Coding Class Starts		Coding Class Starts			
3:30 PM							
4:00 PM					Getting Ready for Work		
4:30 PM	4:50 PM Leave for Gym	4:50 PM Class Ends		4:50 PM Class Ends	Leave for Work		4:50pm Gym
5:00 PM	Gym Session				Work Starts		
5:30 PM	5:45 PM Arrive Home	5:40 PM Arrive Home		5:40 PM Arrive Home			Return Home
6:00 PM	Study (.5 hrs)	Study (.5hrs)		Study (.5hrs)			
6:30 PM	Dinner / Dishes	Dinner/Dishes	Dinner / Dishes	Dinner/Dishes		Dinner/Dishes	Dinner/Dishes
7:00 PM	Study (1 hr)	Study (1 hr)	Study (1 hr)	Study (1 hr)		Chores	Chores
7:30 PM						Game Time (2.5hrs)	Game Time (2.5hrs)
8:00 PM	Other Leisure Time	Other Leisure Time	Other Leisure Time	Other Leisure Time			
8:30 PM	Game Time (1.5 hrs)	Game Time (1.5 hrs)	Study (1.5hrs)	Game Time (1.5 hrs)			
9:00 PM							
9:30 PM							
10:00 AM	Other Leisure Time	Other Leisure Time	Other Leisure Time	Other Leisure Time	Work Ends Return Home	Other Leisure Time	Other Leisure Time
10:30 AM	10:45pm Get Ready for Bed	10:45pm Get Ready for Bed	10:45pm Get Ready for Bed	10:45pm Get Ready for Bed	10:45pm Get Ready for Bed	10:45pm Get Ready for Bed	10:45pm Get Ready for Bed
11:00 AM	Bed Time	Bed Time	Bed Time	Bed Time	Bed Time	Bed Time	Bed Time

Create the Schedule

Behavioral Therapy

Repeated daily cycles + real world rewards

= dependency broken

```
        ┌──────────────────────────────┐
        │   Technology used for        │
    ┌──▶│   Entertainment ONLY After   │
    │   │   Other Responsibilities     │
    │   └──────────────┬───────────────┘
    │                  │
    │                  ▼
    │   ┌──────────────────────────────┐
    │   │   Use is limited each day    │
    │   └──────────────┬───────────────┘
    │                  │
    │                  ▼
    │   ┌──────────────────────────────┐
    │   │   Client has frustration about│
    └───│   limits and now has extra free│
        │   time to pursue other activities.│
        └──────────────────────────────┘
```

Reduce amount of ALL media time according to agreed upon "safe" limits on a daily basis.

Client learns to have feelings of frustration cravings, while accruing significant real-life rewards

- Identify academic, career, social/relational values and set long/short term goals

- Define the activities and milestones in support of goals

- Make gaming/media consumption contingent on completing activities in support of client's goals. Using parental controls or Sentinel Gaming System if needed.

- Reduce rewards of gaming/media consumption by reducing time spent

- Increase motivation for pursuing goals by linking them to tangible rewards

- **Too Many Devices / Apps To Track!!**
  - Some you may not know they have
  - Limit devices if necessary
- **Many Ways to Connect**
  - Cell Data, WIFI, Downloadable content
- **Device Controls Not That Secure**
  - Many Ways to Bypass – Google it!
- **"Beat the Parents Game" with children!**
  - Its fun and they often win!
  - Good controls in the hands of non-tech parents
- **Internet/Gaming Cafes, Coffee Shops with WIFI Hotspots**
- **Not really useful with adults**
- **Seek IT technical help if necessary**
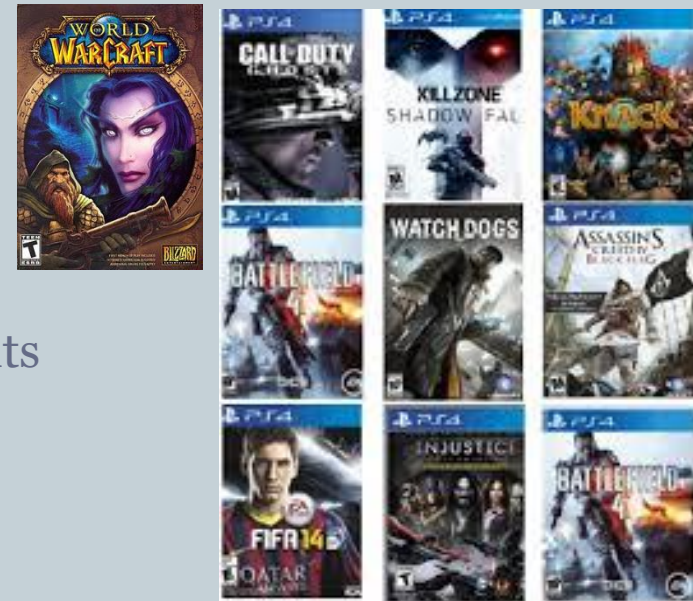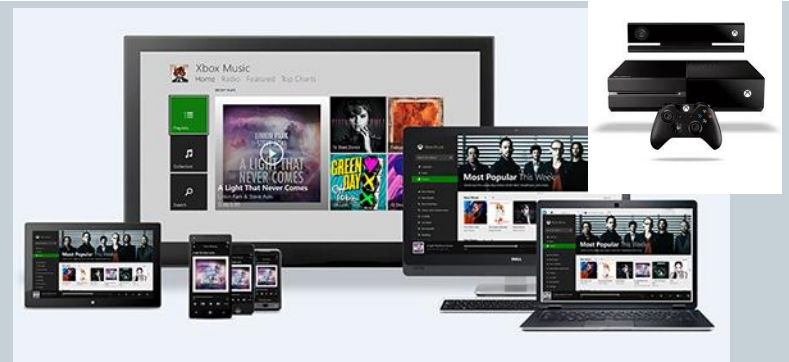
Simplify Media/Gaming Device Availability

- **Consolidate gaming/media use to one device**
  - Other user's computers/tablets/smartphones in home must be secured (password protected, locked away)
  - Other computers must be removed
    - These allows secretive use and use in bed, bathroom, etc.
- **Other media devices except smartphone must be removed**
  - No more extra devices such as Tablets, Ipods (except Nano)
  - Additional gaming consoles or handheld system must be removed
- **If possible move computer system into a common area**
  - Install/configure limit setting tool (parental control) on System
- **Agreement that use would not start until certain time**
  - Set to agreed upon daily limits
    - If user cannot self-limit, then they meet the definition of addict
- **For adults: allow attempt to self regulate smartphone first**
  - If unsuccessful then they must give up the device

Sentinel Gaming System - Designed for the Treatment of Computer Addiction

- **Pro Series : High Performance Gaming PC**
  - Windows OS, VR, 4K ready
- **Designed for Behavioral Treatment Protocol**
  - Automate behavioral contingencies
  - Gradual tapering down use automatically
  - Tools to monitor and encourage productive computer time
  - Web based controls can be operated from anywhere with internet
  - View current status or modify settings/limits in real time
  - Usage monitored (when, how long)
  - Screen image capture allows accountability
- **Settings for when, how long and how users can operate system**
  - Gaming Mode, Study Mode, GamePlay+ Extensions
- **Users may remain System Administrator of the computer system**
- **Highly Secure – Tamper and hack resistant**
- **Not available to the general public – treatment program clients only**
- **New model coming: Less expensive and can work with client's own existing gaming computer or as alternative to other devices**
  - Will make it available to the general public and other clinicians

Mobile Device Parental Controls and Screen Time Support Tools

- ## Children: Carrier Based Best Option
  - Cannot be defeated by child (except jailbreak)
  - Some carriers not useful if WIFI available
    - Data based applications for voice, text, Social Media
  - Free or monthly fees (varies by carrier)
  - Change carriers if necessary
- ## Adults: Application Based
  - Installed apps like Apple Screen Time can be helpful
    - Accountability partner may be required
    - For some, self restriction works for others not so helpful
  - Android "Uninstall protection" prevents removing app
  - Features and support vary by product
- ## Bottom Line:
  ### If you can't manage it, get rid of it!
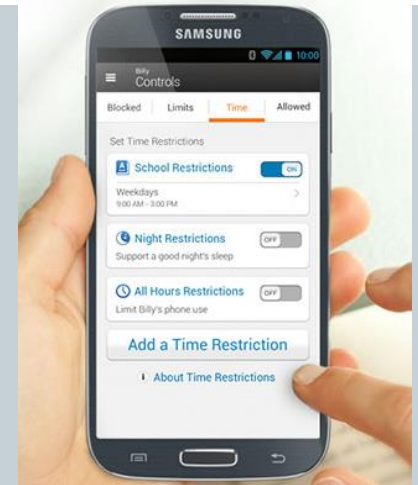
Smartest Phone for Smartphone Dependency

Reverse Impact of Negative Real-life Outcomes

Negative Real-life Outcomes

- Get clear on life direction
  - Career Assessment, counseling
- Family and couples counseling
- Reconnect with Family and Friends
  - This may be uncomfortable, but very valuable
- Past Enrichment Activities
  - What you used to enjoy before excess screens
- NEW Enrichment Activities
  - Pick up new off-line interests and activities
- Spirit of this change:
  Tip the Scales Toward Real-Life Rewards
- Constantly re-evaluate
  - This is not a one time event, will be backsliding
- Outcome: Improved Mood and Wellbeing!

Important Notes

- **Abstinence Does not Cure Addiction**
  - Deprivation effect
  - New reward center learning and developing copy skills critical
- **Addiction / Dependency Treatment Takes Time To:**
  - Reverse negative life outcomes
  - Restore reward pathway sensitivity
  - Develop effective coping mechanisms
- **Removing Technology Abruptly Can be Dangerous**
  - Negative effect on mood can result in violence / suicidal threats
- **Seek Appropriate Treatment When Necessary**
  - Outpatient counseling alone is generally inadequate
- **Prevention is the best strategy**
  - Set safe limits on time and content for yourself and children

Common Myths

- ## An Individual Must Want Treatment to Get Better
  - **False** – almost 100% of my clients did not want to be in treatment
    - They just needed to participate

- ## They Wont Agree to Participate So There Is Nothing I Can Do
  - **False** – set boundaries on dependent children/adults) or partner
    - Must participate or else – there must be some form of consequence
      - Treatment with an SGS Computer an alternative to kicking out an adult child
    - They may not feel the immediate consequence, but it will come eventually

- ## The Individual Has the Problem, They Alone Need Treatment
  - **False** - "Addiction is a family disease" and the family also needs support
  - Family participation, even with adult patients results in better outcomes
    - Family members increase motivation to participate

- ## We should just kick him out and let him figure it out
  - **False** – you would never abandon a sick child because they resist treatment

How to Classify and Code: 2024?

- No Behavioral Addiction Dx or ICD 10 Code
  - Pathological Gambling renamed Gambling Disorder in the DSM 5
- Common Codes for Gaming, Social Media and Online Porn Addiction:
  - Diagnosis ICD-10 Adult
    - Other impulse disorders F63.89, Impulse disorder, unspecified F63.9
  - Diagnosis ICD-10 Children/Adolescents
    - F98.9 Unspecified behavioral and emotional disorders with onset usually occurring in childhood and adolescence
- Gambling:
  - **ICD-10 Pathological gambling F63.0**
  - **DSM 5 – Gambling Disorder**
- Plus other co-occurring disorders

Video Gaming Addiction Treatment Cases

Sample of those presented at 2019 Southwestern School for Behavioral Health Studies

Age	Referral	Behav. Tx	Ind. Tx	Family Tx	Current Status
25	College suspension	Sentinel	yes	as needed	ongoing, successful college term
22	College suspension	self	no	no	failed recent college term
22	College suspension	Sentinel	yes	1/month	ongoing, successful college term
31	No school, no work	Sentinel	no	1/week	successful college term, employed, moved out
20	College suspension	self	no	as needed	failed college, returning to cc college
27	Unemployed, gaming	self	yes	as needed	employed, gaming 5-10 hrs./week
16	Declining academics	self	no	3 sessions	schoolwork improved, refused Sentinel
23	College suspension	abstinence	yes	10 sessions	working full time, no gaming, returning college
23	College suspension	Sentinel	no	1/week	working, successful college term, stopped gaming
27	Unemployed, gaming	self	no	1/month	part time employment, gaming >35 hrs/week
23	Failing college	Sentinel	yes	1/week	successful college term

- Initial psychotherapy ranges from 3 – 6 months
  - Longer times based on lower involvement
- Behavioral treatment ranges from 6 months to 18 months
  - Recommend extending it as long as practical
- Dropout before behavioral protocol established guarantees failure

Summary of Clinical Observations

- Family involvement in treatment had better outcomes
  - Lower no show rate and completion of between-session work
  - Pre-warn parents that client may lose complete interest in gaming
    - This is not usually a treatment goal but does happen
- Psychotherapy in the absence of behavioral intervention showed poorer outcomes
- Brief behavioral interventions do not show lasting treatment effects
  - Premature conclusion of "successful" treatment problematic
- Consistent application of the behavioral intervention, *even in the absence of psychotherapy* resulted in a reduced motivation for play for some clients, and these effects seem to persist long term.
- Those successfully treated seem to maintain treatment effects
  - Clients do not return after successful treatment

○ "The PROTECT intervention is an evidence-based approach which has been shown to significantly reduce symptoms of Internet use disorders over 12 months in two independent studies."

○ "It uses psychoeducation, cognitive interventions, behavioral interventions, and emotion regulation interventions"

○ "PROTECT was highly accepted and feasible in schools and the user satisfaction was high"

Katajun Lindenberg
Sophie Kindt
Carolin Szász-Janocha

Internet Addiction in Adolescents

The PROTECT Program for Evidence-Based Prevention and Treatment

Springer
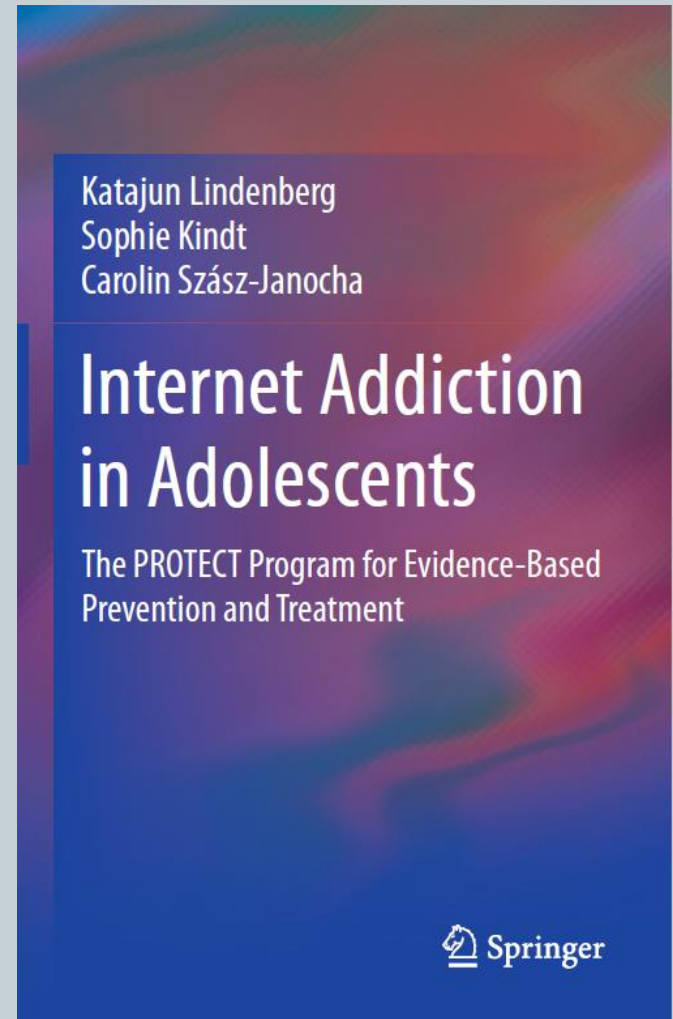
PROTECT Program for Adolescents

- See similarities to my treatment model but targeted toward adolescents in a group setting
  - Psychoeducation
  - CBT with Mindfulness
  - Behavioral Interventions
  - Skills building focus
  - Change Planning
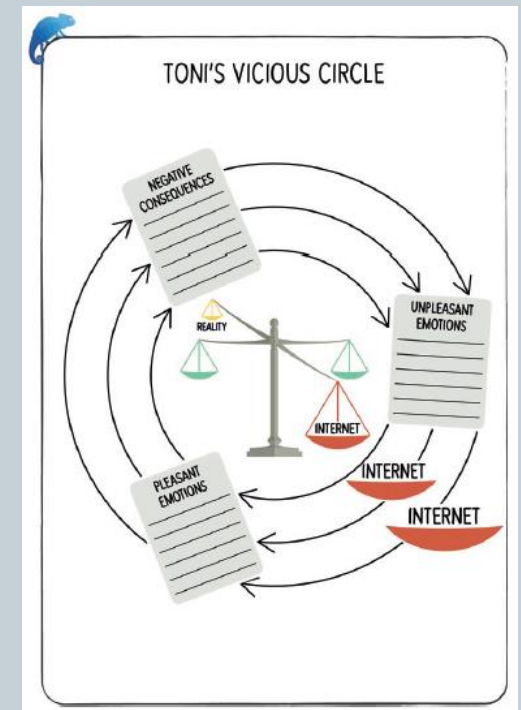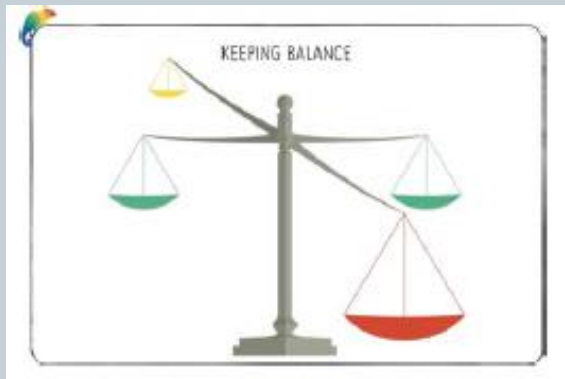
Prevention

"An ounce of prevention is worth **more than** a pound of cure".

- Establish use contingencies and set "safe" daily limits on media consumption
  - Monitor media and gaming activity to ensure safe limits and appropriateness
- Ensure adequate sleep, physical activity, healthy diet, enjoy other leisure activities and participate in a variety of enrichment activities.
- Ensure need for achievement, success is met through other means such as academics, employment, sports, artistic expression, etc.
- Ensure need for connection with others is met through face-to-face contact.
- Ensure emotional support and encouragement provided from loved ones.
  - Not primarily from online gaming friends or social media
- Expect this to be an ongoing battle – no one said this was easy
  - Relapse is likely not a sign of failed treatment
- Videogame and social media industries and new societal norms putting pressure on everyone
- Join the movement to reverse this (i.e. Wait Until Eight)

How Much Screen Time for Children?

Screen time recommendations

0-1 y/o	2-4 y/o	5-18 y/o
0	<1	N/A
0-2	2-5 y/o	6-18 y/o
0	<1	"Balance"

- Pre-school age children
  - Parents and technology
    - Many parents use technology as a parent helper.

- Elementary, Middle School, High School Entertainment Screen time
  - No guidance from WHO or AAP on amount of time
    - Lifestyle balance, AAP has Media Time Calculator (Spoiler alert: just leftover time)

- Guidance on limits to video gaming + other entertainment screen time*
  Gentile et al. (2009), 25+ hrs./week significantly problematic 8 -18 y/o
  - 6-7 (Elementary) <1 hr./day, maximum 6 hrs./week
  - 8-11 (Elementary) <1.5 hrs./day, maximum 9 hrs./week
  - 12-13 (Middle School) <2 hrs./day, maximum 12 hrs. /week
  - 14-18 (High School) < 2.5 hrs./day 15 hrs. /week
- Guidance on limits to social media time
  Riehm, K. E., et al (2019) : 3 hours = 2x mental health risk
  - <14 (Elementary and Middle School) = no social media time
  - 14-16 (High School) <30 minutes / day only with monitoring
  - 16- 18 (High School) <1 hour /day

"Seen too many problems to not take a stand"

What Parents Need to Know: College Issues

- If your college bound child has had issues with screen time management before college, this will not go away when they reach college
  - Stress, isolation, loneliness, boredom
  - Lots of videogame play in college dorms!
- Test your child's ability to self regulate before they go off to college
  - Relax limits with understanding this is a test of self-regulation and readiness for college
- Demand 100% access to your child's school on-line accounts.
  - Not just the guest account – they might have to help you with 2FA
- Request access to their course syllabus
  - Ask them about their study habits
- Regularly check your child's account to verify class participation and grades.
  - Know their classes and schedule
  - Academic suspension is too late
- Check in with your child regularly from day one
  - Empathize with struggles
  - Increased avoidance of parental contact is a common red flag
- Visit your child at school unannounced, even if things appear to be going well
- Seek professional help at the first sign of problems

Opposing Voices: Reader Beware

- Research published to counter negative reporting
- Media presenting opposing views good, but…
  - Sensationalized headlines sell
  - Little real critical analysis of the research
  - Consider the motivation for research outcomes or misinterpretation
- "Age that kids acquire mobile phones not linked to well-being"
  - Flaws: limited sample demographic, no control of parental choice, implies that smartphone use is not linked to any problems in youth
- " Time spent playing video games is unlikely to impact well-being"
  - Flaws: Single item self report on wellbeing, short, 2 week timeframe for each self evaluation. : 2 weeks with three waves. Excluded hours of play over 3 /day. Game play times only recorded for specific games, high use cases excluded, avg. age 23 y/o. Recommendation:
- Use common sense, intuition, self knowledge
  - Safety first, but even safe does not mean appropriate
  - Choose personal values over societal norms. Cigarette anyone?

"With technology we are bringing boredom to the brink of extinction. Satisfying this with the immediate gratification of media consumption may have tragic consequences for mankind"

Resources

computeraddictiontreatment.com/resources

kwoog@computeraddictiontreatment.com
(949) 422-4120

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