



***DIGITIZING OURSELVES TO DEATH***

**@ THE F.O.R.C.E. SOCIETY FOR KIDS' MENTAL HEALTH**

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# You might have noticed .....



Most of us do not  
“speak digitally”  
as our mother tongue.<sup>1</sup>

<sup>1</sup>Prensky, Marc (2001)

# Digital Natives vs Digital Immigrants

**off the mark** by Mark Parisi  
www.offthemark.com



Digital natives are tech savvy by default of their being born around technology – Dr. Ofer Zur (Digital natives was reported originally coined by Marc Prensky)

# Hours of Daily Technology Use<sup>1</sup>

Technology hours/day	Net Generation	Generation X	Baby Boomers
Online	2:31	1:58	1:14
On Computer	2:08	2:32	1:41
Email	1:26	1:37	1:14
IM/Chat	1:45	0:36	0:14
Telephone	2:02	1:47	1:38
Texting	2:20	1:07	0:28
Video Games	1:08	0:31	0:13
Music	3:33	2:35	1:44
Television	2:37	2:12	2:25
<b>Total Daily Technology Use</b>	<b>20:38</b>	<b>14:55</b>	<b>7:51</b>

<sup>1</sup>Conglomerate Data from 2011

Children seem so easily drawn to screens .....



Why is the digital world attractive/addictive?

# Features of the Digital World

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- Anonymity
- Autonomy
- Reward Mechanism
- Realism
- Busyness/Preoccupation

# Objectives for this session

1. To consider problem video gaming as a distinct, diagnosable, and treatable mental health condition with physiological, social and psychological health consequences.
2. To consider the **POSSIBILITY** that screen technology usage plays, at best, a **minimal supportive role** and, at worst, a **downright harmful role** in healthy child development.

# Mr Mythbuster!



# Myths

“Calling video gaming an addiction is a bit overboard.”



# Addiction – Terminology

- Internet Addiction
- Video Gaming Addiction
- Digital Addiction
- Social Media Misuse
- Pathological Video Gaming
- Internet Gaming Disorder (DSM 5)
- **Problem Video Gaming**

# The 21<sup>st</sup> Century Addictions Debate

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**Can technology addict?**

# A behavior that .....

**affects moods.**

**adversely affect normal functioning.**

# Normal functioning?

“I’m not sure that it’s the gaming that is an addiction or if it’s what someone who’s mentally ill does. Our boarder was so addicted to gaming he didn’t come out of his room for days at a time. I was suspicious that he was peeing in the room but wondered about “the other.” He never ate, slept, or took a bath. Well, we disconnected the internet and he left the very next day. My husband had to clean his room coz I couldn’t stomach it. **He actually defecated in a bag and pee-d in coke bottles—all left for us to clean up.** Wow! Yet, I was very concerned about him since he looked like he would faint at any minute.”

-Case Presentation, February 11, 2015

Julie M. Hynes, Iowa Department of Public Health

# A behavior that .....

**affects moods.**

**adversely affect normal functioning.**

can be **used to cope with other emotional and psychological issues.**

can **result in neurological changes.**

# Formidable force against developing brains .....

“Game developers design games to addict, to hook, to prevent termination of play.”



# Myths (con't)

“Calling video gaming an addiction is a bit overboard.”

“Our children will not become video gaming addicts just because they play video games.”



# Myths (con't)

“Calling video gaming an addiction is a bit overboard.”

“Our children will not become video gaming addicts just because they play video games.”



“As long as we stay away from games that are age inappropriate, our children won't develop problems.”

# Problematic Effects of Video Gaming

- Violent video games & media<sup>1</sup>
- Attention problems and executive functioning<sup>2</sup>
- School performance<sup>3</sup>
- Emotional development<sup>4</sup>
- Addiction

<sup>1</sup>Lovaas, 1961; Bandura, Ross & Ross, 1963; Bandura, 1965; Friedrich & Stein, 1973; Grusec, 1973; Cline, Croft & Courier, 1973; Drabman & Thomas, 1977; Collins, Berdt & Hess, 1974; Singer & Singer, 1980; Greer, Potts, Wright & Huston, 1982; Silvern & Williamson, 1987; Anderson & Dill, 2000; Anderson, Gentile, & Buckley, 2007; Anderson et al., 2010; Bartholow, Bushman, & Sestir, 2005; Bushman & Anderson, 2009

<sup>2</sup>Christakis, Zimmerman, DiGiuseppe, & McCarty, 2004; Chan & Rabinowitz, 2006; Gentile, Swing, Lim, & Khoo, 2012; Swing, Gentile, Anderson, & Walsh, 2010; Hastings et al., 2009

<sup>3</sup>Burton, Calonico & McSeveney, 1979; Linebarger & Walker, 2005; Anderson & Dill, 2000; Chan & Rabinowitz, 2006; Cordes & Miller, 2000; Gentile, 2009; Sharif & Sargent, 2006

<sup>4</sup>Hinkley et al., 2014; Uhls et al. 2014

# Myths (con't)

“How do I know my child is addicted? He games for long hours!”



# Assessment: How much is too much?

- Video gaming use is **not** the same as video gaming addiction; time spent is neither a factor nor predictor<sup>1</sup>
- Subjective reality varies from gamer to gamer

<sup>1</sup>Desai, Krishnan-Sarin, Cavallo & Potenza, 2010; Ferguson, 2011; Ferguson, San Miguel, Garza & Jerabeck, 2012; von Salisch, Vogelgesang, Kristen & Oppl, 2011

# Assessment: 3 Cs of Addiction

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**Control** - there are repeated attempts to cut back or control use, with episodes or loss of control in between.

**Compulsion** - a person experiences a sense that they must use. *Can be due to tolerance, withdrawal or psychological need.*

**Consequences** - use is continued despite significant negative consequences.

# Assessment: Physiological Consequences

**Tolerance** – the person needing more and more of the addictive behavior/experience in order to obtain as close as possible the highest of “high”

**Withdrawal** – the experience of the opposite effects obtained from video gaming and internet use.

Brain circuits that suffer alteration:

1. Endorphin Circuit
2. Dopamine Circuit
3. Impulse Control Circuit
4. Stress Response Circuit

# Myths (con't)

“How do I know my child is addicted? He games for long hours!”



“Problem video gaming is just a symptoms of something else.”

# Video Gaming

- Video game use has increased over time; about 9 out of 10 American children and teens play video games<sup>1</sup>
- Research shows that video gaming effects are NOT trivial; effects found in short-term and long-term contexts<sup>2</sup>



<sup>1</sup>Gentile, 2009

<sup>2</sup>Anderson, Gentile, & Dill, 2012

# Problem? Or Symptom?

- Landmark longitudinal study in Singapore<sup>1</sup>
- Finding #1: Depression became **worse** if youth became pathological gamers
- Finding #2: Anxiety, social phobia, and school performance also became **worse** after becoming a pathological gamer
- Finding #3: If children **stopped** being pathological gamers, their depression, anxiety, social phobia and school performance all **improved**.

<sup>1</sup>Gentile, 2011

# Problem? Or Symptom? (cont')

- Mood issues, social phobia and school performance are likely to be **outcomes of pathological technology use** rather than predictors of it
- The observation that these conditions worsen suggests that PVG is a **distinct mental health disorder** rather than being just a symptom of other conditions
- Also likely that such mental health issues have reciprocal relationships and share common risk factors

# Comorbidity

- Typical comorbid/primary disorders include mood disorders, substance use disorders, anxiety disorders, impulse control disorders and personality disorders<sup>1</sup>
- ADHD and anxiety/depression<sup>2</sup>
- Poorer school performance, insomnia, suicidal thoughts, financial problems, relationship problems<sup>3</sup>
- Alcohol consumption<sup>4</sup>
- Conduct problems<sup>5</sup>

<sup>1</sup>Shapira et al., 2003

<sup>2</sup>Lemona et al., 2011; Gentile, 2009, 2011

<sup>3</sup>Gentile, Lynch, Linder & Walsh, 2004; Anand, 2007; Gentile, Coyne, & Bricolo, 2013

<sup>4</sup>Ream, Elliot & Dunlap, 2011

<sup>5</sup>Rehbein, Kleinmann, Mediasci & Moble, 2010; Holtz & Appel, 2011

# Myths

“The more I play,  
the better I’ ll feel.”

“This is just a time  
management issue.”

“Our electronic environment  
is neutral and does not  
contribute to dynamics  
related to mental health  
problems or addiction.”



# Different Media, Different Biases

Printed Word	Television/Visual Presentation
Logic	Imagery
Sequential Thinking	Narrative
History	The Immediate Present Moment (Now)
Objectivity	Simultaneity
Exposition	Immediate Gratification
Discipline	Instant Emotional Response

The average American child can recognize 1,000 corporate logos, but can't identify 10 plants or animals native to his or her own region.



[www.discovertheforest.org](http://www.discovertheforest.org)

<sup>1</sup>Galst & White, 1976; Goldberg & Gorn, 1978.

<sup>2</sup>Fischer, Schwartz, Richards, Goldstein, Rojas, 1991; Macklin, 1994; Hite & Hite, 1995; Henke, 1995.

# Other Digital Problems .....

## Problem Video Everything Else



# Myths

“The more I play,  
the better I’ ll feel.”

“This is just a time  
management issue.”

“Our electronic environment  
is neutral and does not  
contribute to dynamics  
related to mental health  
problems or addiction.”



“Treatment is too  
expensive. I will deal  
with this on my own.”

# Seek help, today!

“If an individual is contemplating treatment, he or she might feel it is too expensive. But on the other hand, **the person probably can't afford not to go into treatment.** Also, in many cities treatment can be free, at low cost, or on a sliding scale, so cost is not a valid excuse. Even if it was expensive, it is cheaper to treat than not to treat! That might be surprising but this is what has been found by several studies ..... Treatment is more of an investment than a cost.

Michael Kuhar, *The Addicted Brain*

# Counseling/Treatment:

- Helps to **recognize** the extent of the problem
- Establishes **practical adjustments** to deal with immediate negative consequences from video gaming
- Addresses **issues that underlie the problem gaming**
- Enhances and/or strengthen **developmental assets**
- Assesses for **mental health issues** previously unrecognized/diagnosed

# Approaches that hold promise

- ACT, CBT, Motivational Interviewing, Existential Theory, Family work
- Family Involvement; ***Mentorship***
- Treat underlying conditions frequently encounter, e.g. mood issues, ADD/ADHD, trauma.
- ADD/ADHD parenting tips
- Simplicity Parenting
- Collaboration with family doctor, psychiatrist, school teachers and counsellors etc.

# Treatment Outcomes

- Client-Directed, Outcome-Informed (aka Feedback Informed Treatment)
- Subjectivity
- Common desirable outcomes:
  1. Improvement in daily functioning
  2. School/work performance
  3. Relationship, Interpersonal Communication
  4. Emotional Regulation
  5. Physical Health

# Myths (con't)

“Once the gamer in the home is fixed, all problems related to him/her go away.”

“Money is not involved as long as I do not gamble online.”

“I’m great at video games, so I’m sure I’ll be good at internet poker or something that makes money.”



“I need video games to improve my hand-eye coordination.”

# Positive Effects of Video Gaming

- Visual-spatial skill development<sup>1</sup>
- Pro-social video games<sup>2</sup>
- Exergames<sup>3</sup>
- Educational video games<sup>4</sup>

<sup>1</sup>Green & Bavelier, 2003; Achtman, Green, & Bavelier, 2008; Green & Bavelier, 2007; Feng, Spence, & Pratt, 2007; Green & Bavelier, 2003

<sup>2</sup>Narvaez, Mattan, MacMichael, & Squillace, 2008; Sestir & Bartholow, 2010; Anderson et al. 2012; Gentile, 2009; Sestir & Bartholow, 2010; Greitemeyer & Osswald, 2009

<sup>3</sup>Biddiss & Irwin, 2010; Graf, Pratt, Hester, & Short, 2009; Melleck & McManus, 2008; Kliein and Simmers, 2009; Rideout, Foehr, & Roberts, 2010; Rosenberg et al., 2010

<sup>4</sup>Gentile, 2008; Murphy, Penuel, Means, Korbak, & Whaley, 2001; Corbett, Koedinger, & Hadley, 2001; Entertainment Software Association, 2011b

# Myths (con't)

“Computer use makes everyone smarter.”

“IT skills necessary for future employment. Better get kids on them ASAP.”

“My child learns so much in such a short time with educational games!”

“Screens make learning fun, and fun is necessary for engagement.”

“Teachers told my 5<sup>th</sup> grade son that access to the internet from home is necessary for schoolwork.”



# Questions?

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**Thk u vry mch 4 ur tme.**

**NE q's 4 me?**

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**RASS** Richmond  
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# 'in the know'



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