Internet Pornography Addiction: Medium and Content Collide with the Human Brain

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Introduction

- Mental health professionals have reported a growing number of people who present for therapy
- “Sex” is the number one search topic on the Internet
- Daily, there are 68 million pornographic search engine requests. An estimated 40 million adults in the U.S. regularly view Internet pornography, 10% of whom admit to having an addiction to Internet pornography
Youth and Internet pornography

- Boys ages 12-17 are the largest consumers of Internet pornography
- 90% of teenage boys view online pornography while doing homework
- Average age of children who are first exposed to Internet pornography is 11 years old
Considerations

- Sky-rocketing prevalence of Internet pornography use
- Neurological effects of Internet pornography
- Interventions to promote affective maturity and help to reverse the adverse behavioral changes
Addiction disorders

- Discovery
- Experimentation
- Habituation
- Compulsivity
- Hopelessness
Reasons for the addictive nature of Internet pornography

Accessibility:
- The omnipresence of electronic devices
Affordability:

- Studies indicate that 80-90% of persons who use online pornography pay nothing and 10-20% of users pay an average of $60.00 per month.
Reasons for the addictive nature of Internet pornography

Anonymity:
"It happened in stages, gradually...once you become addicted to it [pornography]...[you] keep looking for more potent, more explicit, more graphic kinds of material. Until you reach a point where the pornography only goes so far...where you begin to wonder if maybe actually doing it would give that which is beyond just reading it or looking at it."
Charged with kidnapping, rape and aggravated murder of three women for over a decade in his home told a Cleveland judge that he had a "sexual problem" and was "addicted to pornography"
Neurological implications of Internet Pornography

To illustrate...

- By repeatedly riding the bike, the child’s central and peripheral nervous system communicate more effectively so that motor skills necessary to ride the bicycle become more precise and efficient.
- The brain’s capacity to adapt the operation of the nervous system to various stimuli is a normal lifetime phenomenon.
Marshall McLuhan

- *Medium* of the message has a more significant role than *content* in altering functional connectivity of the brain.
Pleasure Centers of the Brain

- **Excitatory Center**
  - Dopamine
  - Acetylcholine

- **Consummatory Center**
  - Release of endorphins, oxytocin and serotonin
Oxytocin

- **Emotional:**
  - Anxiolysis
  - Positive mood
  - Passive stress coping
  - Trust

- **Social:**
  - Maternal behavior
  - Maternal aggression
  - Pair bonding
  - Sexual behaviors

- **Autoregulation:**
  - Morphological plasticity
  - Autoexcitation during birth and suckling

- **Neuroendocrine:**
  - Attenuation of HPA axis responses
  - Local amino acid and noradrenaline release

- **Cognitive:**
  - Social memory
  - Olfactory memory
  - Spatial memory

Oxytocin release
With repeated excessive stimulation, the brain adapts to the stimuli dampening the pleasure system’s ability to respond.
High speed Internet and the release of neurotransmitters

- The addict craves more novel Internet pornography to experience pleasure
Internet pornography addiction can mimic:

- ADHD
- Anxiety
- Depression
Erectile dysfunction

More common causes of erectile dysfunction

- Diabetes
- Kidney disease
- Prostate cancer
- Spinal cord injury
- CVA, MS, Parkinson’s dx
Internet Pornography and erectile dysfunction

Treatment?
- Stop viewing pornography
- Older Men recover in 2 to 4 months
- Young men require 4 to 6 months
Highly addictive quality and deleterious effects of Internet pornography require:
- Parents
- Educators
- Physicians and mental health care providers

To aggressively address Internet pornography addiction
Scenario

Terry is a 36 year old male married 12 years with two children employed as a high school principal when he presented for psychiatric evaluation and treatment.

- Terry first looked at Internet pornography at age 17 “out of curiosity”.

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Shifting neural pathways
Roadblocks are necessary to create new Neural pathways

With repeated exposure to stimuli, the brain slowly changes itself neurologically to create mental tracks or neural pathways, which contribute to either healthy habits or unhealthy ones.

To create new tracks or neural pathways and alter stimulation sequences, roadblocks are necessary.
Roadblocks are necessary to re-create healthy neuroplastic changes

- Destroy all pornographic material
- Install protective software that limits access to IP sites
- Committed accountability partner
- Shift focus to pleasures that form healthy habits of recreation thereby fostering healthy neuroplastic changes
Conclusion

The new frontier of the second millennium, cyberspace, is replete with interplay of danger and promise. In this light, physicians and mental health care workers need to educate patients about the detrimental effects of Internet pornography and that treatment for this addiction is available.