Internet Game Addiction

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Second Life
Objectives

1. Observe and understand how multi-player video games look and feel.

2. Discuss the social and psychological rewards players experience in a virtual world.

3. Examine how video game use, abuse and addiction fit in the broad category of behavioral impulse control disorders.

4. Review published approaches to treatment and recovery.
“Taken together, [studies show] internet addiction is associated with structural and functional changes in brain regions involving emotional processing, executive attention, decision making, and cognitive control.”

--research authors summarizing neuro-imaging findings in internet and gaming addiction (Lin & Zhou et al, 2012)
Gray matter atrophy: Multiple studies have shown atrophy (shrinkage or loss of tissue volume) in gray matter areas (where “processing” occurs) in internet/gaming addiction (Zhou 2011, Yuan 2011, Weng 2013, and Weng 2012)
Objective 1: Observe and understand how multi-player video games look and feel.
Definatons

A Classification of Chemical and Behavioral Addictions

- Behavioral Addictions
  - Gambling
  - Eating Disorders
  - Shopping
- Internet Addictions
Internet Addictions and Compulsions

- Texting and Email
- Social Networking
- Gambling
- Infidelity, Sexting and Porn
- Gaming
Terms and concepts

- Single Player vs. Multi Player (MMORPG)
- Puzzles and Strategy Games (Sandbox)
- Role Playing Games (Avatar)

Virtual Life vs. Real Life

- Game Console (XBox, Playstation), computer or mobile device
Top Ten Most Addictive Games 2013

10. The Sims
9. Solitaire
8. Grand Theft Auto
7. Super Mario Bros.
6. Football Manager (Fantasy Sports)
5. Lemmings
Top Ten Most Addictive Games 2013

4. Tetris
3. Call of Duty
2. Pac Man
1. World of Warcraft
Other Games Worthy of Note...

- Everquest
- Final Fantasy 7
- Fallout 3
- Quake
- Civilization III
- Minecraft
- Starmade
- Facebook Mobile Games
  - Farmville II
  - Candy Crush
Minecraft
Candy Crush Saga
Sims
grand theft auto
Call to Duty - Black Ops
Today’s most popular MMORPG is “World of Warcraft”, the latest game in Blizzard’s Warcraft series, situated in the fantasy world of Azeroth that is populated by members of the opposing factions of the Alliance and the Horde.
World of Warcraft’s extension “Cataclysm” was among the top five selling computer games in 2011. In 2013, eight million players immersed themselves in the world of Azeroth, clearly demonstrating the game’s mass appeal.
World of Warcraft
World of Warcraft

Beginner's Tutorial

Part 1 - Moving in WoW
World of Warcraft

Let's Play

World of Warcraft
Mists of Pandaria
Objective 2: Discuss the social and psychological rewards players experience in a virtual world.
Discuss

The Benefits and the costs of playing massive multi-player role playing games
MMORPG Benefits

- Fun, discovery and escape from real life
- Reward...Dopamine Rush
- Achieving goals, advancement, competition, accomplishment, acquiring status, power
- Friends, new relationships, chatting, working as a team
- Social status, reputation, admiration
- Immersion in fantasy, better self as avatar
MMORPG Consequences

- Sacrificing real-life relationships
- Sacrificing other pastime activities
- Disruption in sleep, work, education, socializing
- Obsession with virtual gaming with lack of attention in real life
- Depression and hostility, stress, dysfunctional coping
- Poor academic achievement, problems with verbal memory,
- Low well-being and high loneliness
Gradual loss of interest IRL and greater engagement in virtual world

-Arrested Development
Protective factors with Internet Addiction

- Conscientiousness
- Extraversion
- Family Warmth
- Physically active and involved in team sports
- Parent attention and controls
Risk factors with Internet Addiction

- Bright, Socially Awkward teenage and young adult males
- Individuals with other psychological difficulties
- Individuals with long periods of unstructured time (for example, a teen who is not involved in other activities outside of school)
- Impulsive, poor social skills
- Gray Matter Atrophy
- Neuroticism (negative, pessimistic, cynical)
- Aggression, hostility and sensation-seeking
Family Conditions

- Reduced parent attention and monitoring
- Single parent, time alone, access to Wi-Fi, game consoles
- Dissatisfaction with Family
- Domestic violence
Co Morbid conditions

- Classic vs. New Addicts
- Depression
- General and Social anxiety
- ADHD (bored, anxious, aversion to delayed gratification)
- Hostility and lack of Family Warmth
- Substance Abuse
Is it Addiction or a Symptom of Something Else???

-Co Morbid and Diagnosis: DSM V says need further investigation to say its an addiction

-80% of treatment cases there is a co-occurring disorder (ADHD, OCD, SA, Social Anxiety, Depression)

-Naltrexone and SSRI have show positive results in treatment

-Current treatment and recovery mirrors current SA Treatment
The Case Against it Being an Addiction

“İ’m a Chocaholic!”...Is all excessive behavior a psychological disorder, i.e. addiction? Have we set the bar too low?

With a diagnosis will come “BIG Pharma”

80% of treatment cases have a co-morbid condition

Early flawed studies
The Case Against it Being an Addiction

- Meet DSM V Definition of Addiction
- 20% addicted without other co occurring disorder
- Recognized inpatient and outpatient treatment methods
- Creates same dopamine rush as other behavioral addictions
Characteristics of Internet Game Addiction

- Free Access to Internet, Strong Bandwidth

- Blends social media, social connectedness, fantasy and adventure

- Loss of Time

Content preference

- Avatar as Alternative Better Self
Time...... Age of first use less than a year, time online per sitting >8 hrs, times per week, total hours per week >24 hrs
Proposed Definition

A PSYCHOLOGICAL AND BEHAVIORAL DISORDER CAUSED BY AN INDIVIDUAL’S REPEATED AND EXCESSIVE USE OF THE INTERNET, WHICH REQUIRES MENTAL HEALTH TREATMENT. THE STANDARD FOR INTERNET ADDICTION REFERS TO USERS WHO ARE ON-LINE MORE THAN SIX HOURS DAILY AND HAVE HAD AT LEAST ONE OF THE FOLLOWING PROBLEMS DURING THE PAST THREE MONTHS:

• Yearning to be on-line

• Mental or physical distress when not on-line

• Irritation when not on-line or interrupted

• Difficulty concentrating or sleeping
Parent’s Early Warning Signs

(HANDOUT)
Objective 3. Examine how video game use, abuse and addiction fit in the broad category of behavioral impulse control disorders.
Digital Media Attractiveness

- Content that activates dopamine (i.e. creates pleasure sensation) is ...
- Easily accessible and affordable
  - Time-distorting
  - Interactive
  - Anonymous
- Pleasurable activity positively reinforced through repetition
DSM V Addiction Criteria

1. Tolerance: Taking in larger amounts or for longer than you meant to.

2. Wanting to cut down or stop but not managing to.

3. Time: Spending a lot of time planning, getting, using, and recovering from use.

4. Craving and urges to use, withdrawal upon cessation of use.
DSM V Addiction Criteria

5. Not managing to do what you need to do at work, school, or home due to use.

6. Continuing to use despite problems and consequences.
Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one’s behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.
A Working Definition of Video Game addiction

- Excessively engaging in a pleasurable behavior with the intention of altering mood and consciousness........

- Causing negative life consequences........

- Resulting in increased tolerance and withdrawal when stopping.
Genetics and Epigenetics

Study: people with Internet addiction were more likely than others to have a genetic mutation on the CHRNA4 gene, which is known to play a major role in nicotine addiction.

Epigenetics...Our genes are altered by our perception of the environment pre natal to 7 years
Epigenetics

- A genetic pre disposition interacting with a vulnerable environment
- Our genes are altered by our environment
- The belief that we are genetically hard-wired is no longer founded.
- Prenatal to 7 years codes us
  - Calm Prenatal experience = Frontal Cortex fed
  - Stressful Prenatal experience = All Other Areas fed
Predisposition and Correlations

- Family Hx of Addiction and related "Reward Deficiency Syndrome"
- Reduced feelings of satisfaction with real life pleasures
- Low emotional well-being (can be both cause and effect)
- Recent Stress
- Poor school performance
- Poor interpersonal relationships
- Avoidant coping style (withdrawal, self blame, avoid conflict, rationalizations, desire to escape from reality)
- Poor problem solving skills
Addicted to the Dopamine Rush

- Polygenetic Inheritance (50% nature, 50% nuture)
- Inherit underdeveloped dopamine receptors
- Dopamine activation by nucleus acumbens (pleasure/reward)
- Adaptation/dependence=behaviour is encoded as the source of dopamine, loss of control over executive function and use
- Dysregulated stress response=urge/craving triggered by stress or cues
- Frontal cortex (judgement, analysis, self control, willpower) damaged by chemicals
- **Alcohol=brain bounces back, 60 days**
- **Continued use creates** Hard, brittle dopamine receptors, over activated amagyula, glutamate (NAC)
- **Other drugs longer, some drugs permanent brain damage, methamphimes, extasy**
- **Treatment**
  - 1 Dial down amagyula...Physical, detox, sleep, abstinence, diet, exercise
  - 2. Dial up frontal cortex through mindfulness
Effects of Drugs on Dopamine Release

Amphetamine

Nicotine

Cocaine

Morphine

% of Basal Release

Time After Drug

Di Chiara and Imperato, PNAS, 1988
Impulse Control Disorders

- Decreased flexibility in part of brain necessary to change habits, rigid, hard damaged synapses, causes distorted thinking, a learning deficit/disorder, unable to update behavior
- Synapse must be flexible to translate desire/will into action, to regulate self, to do the right thing
- Must regain control over behavior, glutamate (NAC), sleep, stress management, breathing, meditation, nutrition, exercise
- Make brain open to change rather than resist it
Objective 4. Review published approaches to treatment and recovery

- Assessment
- Assess and Address Motivation
- Goal Setting
- Intervention
- Integration
- Recovery and Continuing Care
Assessment
Psychosocial Assessment

- Family History/Family Problems
- Family Rituals/Activities
- Family Hx of Addiction
- Risk Taking Behaviors
- Friends
- Loneliness/Boredom
- HX abuse/Neglect
Assessment Questions

- What you enjoy about playing
- How do you feel when you play
- Age when you started playing video games
- Early Games / Recent Games
- What are your abilities and strengths (VL/RL)
- How many hours a day online and gaming
- What you don’t enjoy about playing/downside
- What are your desires, hopes and dreams
Upside/downside

If you don’t stay in the upside, you will never engage them in the downside.
Internet Addictions Tests

- Internet Addiction (handout)
- Internet Game Addiction Test
Internet Addiction Diagnostic Questionnaire 1998

Answer “yes” or “no” to the following statements to see if you may be addicted to video games or online gaming:

1. Do you need to play online games with increasing amounts of time in order to achieve the desired excitement?

2. Are you preoccupied with gaming (thinking about it when offline, anticipating your next online session)?

3. Have you lied to friends and family members to conceal extent of your online gaming?

4. Do you feel restless or irritable when attempting to cut down or stop online gaming?
5. Have you made repeated unsuccessful efforts to control, cut back, or stop online gaming?

6. Do you use gaming as a way of escaping from problems or relieve feelings of helplessness, guilt, anxiety, or depression?

7. Have you jeopardized or lost a significant relationship, or even risked your marriage because of your online gaming habit?

8. Have you jeopardized a job, educational, or career opportunity because of your online gaming habit?

If you answered “yes” to any of the above questions, you may be addicted to online gaming. These are common warning signs that you have lost control, lied, or possibly risked a relationship to support your gaming behavior.
Internet Addiction Test Scoring

- **Mild - Normal Online User** = 20-49
- **Moderate - Some Problems** = 50-79
- **Severe - Major Problems** = 80-100
Goal Setting and Assessing Motivation
Set Goals and Facilitate Motivation

- Create a safe place, non-judgemental presence in order to developing and sustain a therapeutic relationship
- Understand their SNAP and desires, hopes and dreams
- Identify ambivalence and encourage change talk
- Gently identify discrepancy between what I do and what I want
Identifying and Enhancing Motivation

What is motivation?
Establishing readiness for change

A purposeful, intentional, goal directed, probability one will enter into and continue a change strategy

Motivation will ultimately determine the outcome of treatment

A way of interacting employing client-centered and cognitive-behavioral approaches to...

- Reduce resistance
- Resolve ambivalence
- Improve compliance to treatment
- Get the client to want what you have to offer
Five Principles of Motivational Counseling

1. **Express empathy and seek to understand through active listening** (Empathy vs. Authority)

2. **Develop discrepancy between client’s goals or values and current behavior**

3. **Avoid argument and direct confrontation**

4. **Adjust to client’s resistance rather opposing it directly**

5. **Support self efficacy and optimism**
MI

- **Self Inventory, want to vs. need to**
- **Self Concept IRL and IVL**
- **Explore any discrepancy between what you want, need, desire, value and what you do**
- **Process and Outcome Resistance**
- **The Colombo Approach**
Goal Setting

- Person-Centered Plan Development
- Goals in their words
- Measurable, time specific objectives
- Interventions to assist in meeting objectives
Intervention
First Order…Detox and Withdrawal

- Abstinence from Trigger Applications and Controlled moderate internet use
- Sleep
- Diet and Supplements
- Exercise
- Quiet time and Mindfulness
First Order...Detox and Withdrawal

Techniques
- Cost/Benefit Reminder Cards
- Schedule online time, Alarm
- Replace time with positive activity
- Journal
Step 1 Setting the Tone of safety

- **Games Positive Benefits**, sensations of favorite games, Discuss the pleasure, the benefits
- Discuss their strengths, abilities, gifts, desires, hopes, and dreams
- Identify Exceptions, past real life pleasures and activities

Second Order....Mindfulness- Based Cognitive Behavior therapy
Second Order....Mindfulness- Based Cognitive Behavior therapy

- **Step 2  Handwritten Journal**
  - **Self Inventory, Do I like it or do I need It, What needing is like, what is it really that I need**
  - **Everything has a price, or every benefit has a corresponding consequence when done in excess, What is the price I pay**
Step 3 Education

PsychoEducation Re. Addictions, Internet Addictions and Internet Game Addiction, CBT, cue/routine/reward, How pleasures can become habits, how to replace a unhelpful habit with a helpful habit.
Education Example

• **Focus on how we learn habits**
• **How habits become addictions, happens outside our conscious awareness**
• **New routines > habits > addictions**
• **Habits = conditioned responses, auto pilot**

• **Cue  Response  Reward**
  • **Repeated Response, continued repetition of a thought, feeling or action (a chunk)**
  • **Habits can become addictions**
• A habit is a formula (a program, an app, an action) your brain automatically follows every time...

• Operant conditioning:
  – When I see a cue (trigger/urge) ...
  – I will do a routine (unhelpful behavior/action) ...
  - In order to get a reward (payoff)

• To make a conscious choice to re-program that area of the brain and that habit, we need to come up with a different formula, a different routine
Step 4 Thoughts, Feelings and Actions

ANTS...What are their automatic thoughts that may be sometimes true, sometimes false, always false or just plain unhelpful (Daily Mood Log Journal)

Identify triggers and cues

Develop a personal lifeline
Step 5 Deepen the Individual Focus

- Replacing automatic negative thoughts and coping styles with more accurate and helpful thoughts
- What are their attitudes and points of view (intermediate beliefs) about self and others
- What are their core beliefs about themselves (competence, worth, lovable)
- Replacing Beliefs with more accurate and more helpful Beliefs
Third order...With a little help from my Friends

- **Engage vs. Avoid**
- **Social Support**
- **Cultivate disciplines around time management and being goal directed**
- **Working on Emerging Topics**
Third order…With a little help from my Friends

- Developing a personal Recovery/Relapse Plan
- Developing a Support System, Sponsor
- Co Morbid Treatment
- Periodically Do An Inventory
Intervention summary

Approaches and Techniques for Treating Internet Game Addiction
- Withdrawal and Detox
- Psycho-education
  - Signs and Symptoms, Progression
  - Appropriate Use of the Internet
  - Positive Psychology
  - Mindfulness
  - Diet, Exercise, Rest
- CBT and Solution Focused Therapy
  - Creating Purpose in Life, What to do with the time
  - Social Connectedness, Can’t Recover Alone
  - Treating Co Morbid Conditions
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