

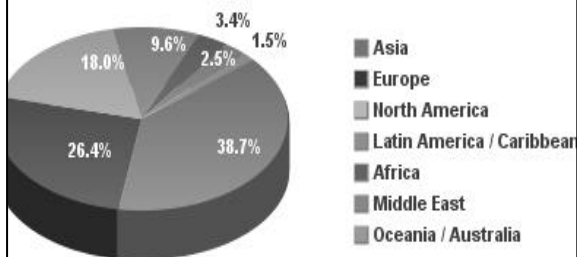
## Can you really be addicted to a computer? An introduction to internet addiction

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## Average rates of use of internet

- 16.7 hours per week – USA young people
- 20 hours per week UK young people (*Institute of Public Policy Research, March 2008*)
- 23 hours per week – Korean 6-19 year olds
- 91% of Australian Families have internet connection (ABS, 2007)
- EU Kids Online Project
  - 100% of UK children 12-17 online last month
  - 66% of their parents online last month

## World Internet Users December 2007



source: [www.internetworldstats.com](http://www.internetworldstats.com)  
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## What is “addiction”?

- “uncontrollable, compulsive drug seeking and use, even in the face of negative health and social consequences”  
*Leshner, Director of National Institute of Drug Abuse, USA.*

## What is “addiction”?

DSM-IV criteria for Substance Dependence

- Tolerance
- Withdrawal
- Larger amounts or for longer than intended
- Persistent desire or unsuccessful attempts to cut down or control
- Time spent acquiring, using, or getting over the substance
- Social occupational and or recreational activities given up because of it
- Use despite harms

## Substance addictions

- Alcohol
- Heroin
- Tobacco
- Ingestion of a substance that cause physiological changes
- Each substance has particular markers
  - Desired effect and withdrawal effect

## Non physical addictions?

- Impulse Control Disorders
- Difficulty controlling a behaviour

DSM-IV Types:

- Pathological Gambling
- Kleptomania
- Pyromania
- Trichotillomania

## Impulse control disorders

Key feature of ICDs

- tension or affective arousal followed by pleasure and gratification

New proposed disorders for DSM-V:

- Compulsive Shopping
- Compulsive Hoarding
- Internet addiction

## Proposed criteria for internet addiction

- Do you feel preoccupied with the internet? (Think about your online activity or anticipate your next online session.)
- Do you need increasing amounts of time on the net in order to achieve satisfaction?
- Have you repeatedly made unsuccessful efforts to control, cut back or stop internet use?
- Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop internet use?

*Centre for Internet Addiction Recovery (Kimberly Young)*

- Do you stay online longer than originally intended?
- Have you jeopardised or risked the loss of a significant relationship, job, educational or career opportunity because of the internet?
- Have you lied to family members, a therapist or others to conceal the extent of your involvement with the internet?
- Do you use it to escape from problems (eg, feelings of helplessness, guilt, anxiety, depression)?

*Source Centre for Internet Addiction Recovery (Kimberly Young)*

## 4 main symptoms: Dr Jerard Block

*American Journal of Psychiatry editorial, March 2008*

- Internet addiction: gaming, sexual preoccupations, email/texting
1. Excessive use
  2. Withdrawal
  3. Tolerance
  4. Negative repercussions

## In what way could a computer be addictive?

- Reinforcing
  - Winning
  - Socialising
  - Risky
- Motivating features
  - games
- Dissociation/numbing
  - games & surfing

### **In what way could a computer be addictive?**

- Time distortion (*Wood et al, Cyberpsychology & Behaviour, 2007*)
- Instant gratification - shopping
- Mood-altering
- ACE Model – *Kimberly Young*
  - Accessibility
  - Control
  - Excitement

### **What are young people “addicted” to?**

- MMORPGs
- Social Networking/IM/text
- MMUR / Virtual Worlds

### **MMORPGs**

Massively Multiplayer Online Role-Playing Games

- World of War Craft (Warcrack)
- Matrix online, Lord of the Rings online,
- Star Trek, Star Wars, Stargate
- More commonly males > females





## MMORPG & Addiction

- No well conducted studies.
- Estimates :
- 8.5% of American youth gamers
- 12% of British gamer
- 2.1% of South Korean Population aged 9-19 years.
- China: number one issue for young people

Addiction Treatment in China:

<http://www.youtube.com/watch?v=TN6vr9IwQ?I>

## MMORPGs & Addiction

- MMORPG Survey (Yee, 2006) 30,000 players internationally.
- Players report playing 23 hours per week *on average*.
- Age ranged 11- 68, Mean 26 yrs
- 50% of players self-report being “addicted”
- 70% report having played 10+ hours straight
- 18% report playing on-line caused them financial, health, and academic or social problems
- Younger the player, greater self-reported addiction

## Why are they addictive?

- PET scans show activation of the reward pathway
- Games are designed to be compelling (addicting)
- Mastery, Success, & Community/Relationship (Yee, 2006).
- People can live out other identities.
- Behavioral psychology used - reinforcement schedules
- More play time & greater rewards = greater reinforcement
- Recent- development “Black Box” automated play, March 2008
- \$120,000 tournament prizes

## Why are they addictive?

- Rewarding socially – go on “crusades” with 10 or more peers.
- IM chat while playing – channels
- Subscription model - no end to play, free initially, then pay.
- Pay to buy “mounts” to increase competitive advantage.
- Competing reward systems (real world)

## IM/Social Networking

- 50% of UK kids have a profile (Ward, 2008)
- Social belonging critical to adolescents
- Continuation of socialisation with friends.
- “If you’re not on it you’re out of it” (Growing up on line, PBS)
- ‘I want to spend less time ’cos what I do on it is just really pointless—like MySpace is just really addictive.’ (Girl, 17, IPPR study, UK March 2008)
- “I’ve given up MySpace for VCE” – Girl 17.

## Virtual Worlds or MMUR

- Massively Multi-User Reality
- Not games – no points, levels, shooting/winning
- Games within the worlds - soccer
- Second Life – 13 million accounts (premium costs \$300 per week get Landownership and building opportunities)
- IMVU, There, Active Worlds, Kaneva, Red Light Center

## Land Auctions

Get land for your own dream house, business, or island. **Bid Now!**

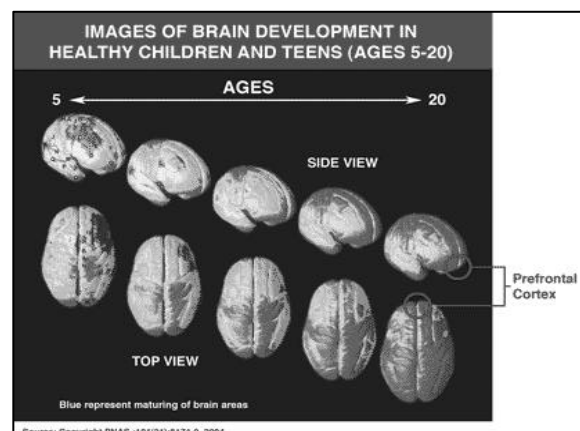


## Virtual Worlds or MMUR

- Infiltrated into “real-world” economy
- Selling land and businesses for Second Life on Ebay!!
- Roles: Guides, Leaders, Hosts and Hostesses.
- Jobs
- People can be DJs playing music, hosting parties, usually have a set time they play

## Impacts of Compulsive Internet Use

- Physiological differences between tertiary alcohol or heroin use and internet use
- Sleep deprivation
- Poor nutrition
- Poor exercise
- Seizures (Chuang *Cyberpsychology & Behavior* 2006)

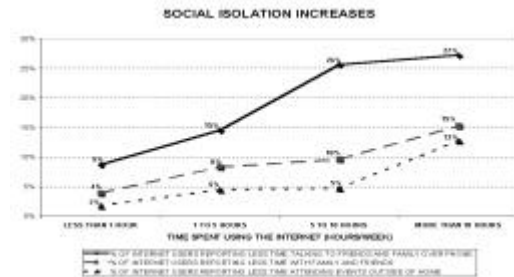


## Impacts of Compulsive Internet Use

- Adolescent brain development
- Development of future connections – “use it or lose it”
- Adolescents, young adults sensitive to reward system stimulus due to brain development
- Young people at greater risk of addiction
  - Don't “see” the harms
  - Don't “see” the risks

## Impacts of Compulsive Internet Use

- Adolescent social development



The Stanford Institute for Quantitative Study into Society – Internet Study

## Impacts of Compulsive Internet Use

- “Internet addiction” associated with
  - Depression
  - Social phobia (*Yen et al., Journal for Adolescent Health, 2007*)
- Adolescent emotional development
  - Using the internet to numb pain
  - Turning to the internet for help
    - Positive websites – Reach Out
    - Self-harm
    - Pro-ana websites



## Impacts of Compulsive Internet Use

- Academic Problems
  - As game usage increases grade point average decrease
  - In college students (*Anand, Cyberpsychology & Behaviour, 2007*)
  - In 13 yr old children from lower income households (*Jackson et al, Cyberpsychology & Behaviour, 2007*).

## Media

- 4 mth child dies from neglect (Korea, 2005) parents say game took longer that day....
- 10 occasions of cardiopulmonary-related deaths (Korea, 2007)
- One game-related murder (Korea, 2007)
- One death after 50 hours continuous play (Korea, 2005)
- Death after 15 days straight of play (China, 2007)
- Death after 3 days of straight play (China, 2007).

## Impact of Internet addiction

<http://www.youtube.com/watch?v=weeSOUmIPiU&feature=related>

## Summary

- Not a “disorder” yet
- Very little research and often poor quality BUT
- Real problem for many
- Real issue for Drs, Psychologists, Counsellors and other professionals to assess.
- Real issue for parents to talk with their young people about

Many thanks!  
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