

PROBLEMATIC INTERNET USE (PIU)

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The “IACAPAP Textbook of Child and Adolescent Mental Health” is available at the IACAPAP website <http://iacapap.org/iacapap-textbook-of-child-and-adolescent-mental-health>

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IACAPAP

**International Association for
Child and Adolescent Psychiatry
and Allied Professions**

...because every child matters

Learning objectives:

- Definition/Diagnosis
- Epidemiology
- Pathophysiology
- Treatment
- Course and Outcome
- Prevention



Problematic Internet Use

The Basics

- Definition
 - Behavior/ Illness
- Diagnosis



<https://www.youtube.com/watch?v=pB5cSLdOr8U&feature=related>

World of Warcraft
Dangerous addiction or cultural
phenomenon?



Definition

- Maladaptive preoccupation with internet use, experienced as irresistible, for periods of time longer than intended
- Significant distress or impairment resulting from internet use
- Absence of other psychiatric pathology that might explain the excessive Internet use.



Problematic Internet Use

Diagnosis

Box H.6.2 Ko et al's (2005) proposed diagnostic criteria for Internet addiction

A. Six or more of:

1. Preoccupation with Internet activities
2. Recurrent failure to resist the impulse to use the Internet
3. Tolerance: a marked increase in Internet use needed to achieve satisfaction.
4. Withdrawal, as manifested by either of the following: a) dysphoric mood, anxiety, irritability, and boredom after several days without Internet activity; b) use of the Internet to relieve or avoid withdrawal symptoms.
5. Use of the Internet for a period of time longer than intended.
6. Persistent desire and/or unsuccessful attempts to cut down or reduce Internet use.
7. Excessive time spent on Internet activities.
8. Excessive effort spent on activities necessary to obtain access to the Internet.
9. Continued heavy Internet use despite knowledge of physical or psychological problem caused or exacerbated by Internet use.

B. Functional impairment. One or more of:

1. Recurrent Internet use resulting in a failure to fulfill major obligations.
2. Impairments in social relationships.
3. Behavior violating school rules or laws due to Internet use.

C. The Internet addictive behavior is not better accounted for by another disorder.



Problematic Internet Use Measures

Table H.6.1. Scales to measure Internet misuse

Scale	Problematic Internet Use Questionnaire (Thatcher & Goolam, 2005)	Internet Addiction Scale (Young, 1998)	Internet Addiction Disorder Scale (Goldberg, 2000)	Internet Addiction Scale (Chen, 2005)	Internet Stress Scale (Valleur & Velea, 2002)
Description	Quantitative 20 items	Quantitative 20 items	Qualitative 11 items	Quantitative 26 items	Quantitative 9 items
Scoring	5-point Likert scale	5-point Likert scale	Meeting >2 criteria indicates Internet addiction	4-point Likert scale	Score > 4 suggest addiction risk
Target population	Adolescents Adults	Adolescents Adults	Adolescents Adults	Adolescents	Adolescents



Problematic Internet Use

Epidemiology

- Prevalence rate: 1%-18% of adolescents
 - Western societies: 2-12%
 - Eastern societies: 2-18%
- Gender
 - Boys tend to have higher rate for PIU



Negative Consequences

- Impaired academic performance
- Impaired social interaction/family relations
- Decreased self-perceived acceptance by peers
- Increased drinking in males
- Lower self-worth in females



Associated Psychiatric Symptoms and Comorbidity

- Hostility
- Depression, irritability or mood changes
- Phobic anxiety
- Daytime sleepiness or sleep deprivation



Legend of Zelda: Ocarina of Time, one of the most popular video games



Negative Consequences

Studies with adults show association with:

- Failed marriages
- Unemployment
- Neglected children
- Sleep deprivation
- Losing control
- Craving and withdrawal
- Social isolation
- Academic failure
- Financial problems
- Job loss
- Marital discord
- Aggression

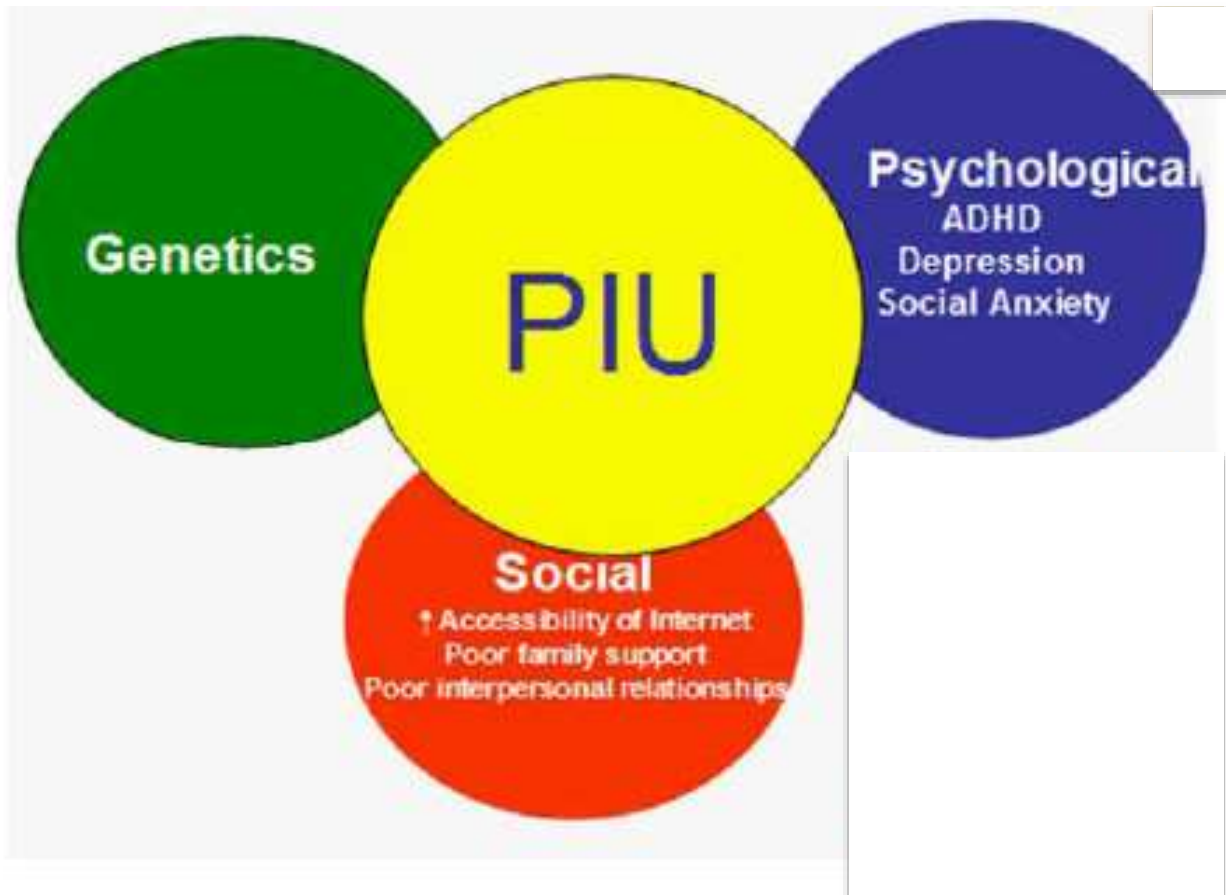


Problematic Internet Use

Possible Negative Effects



Problematic Internet Use Pathophysiology



Problematic Internet Use

Risk Factors

- Psychiatric Comorbidity
 - Attention deficit hyperactivity disorder
 - Depression
- Social support
 - Socially isolated
- Low self esteem
- Poor quality family relationships
- Loneliness



Problematic Internet Use

Effect on the Brain

- fMRI similar to substance addiction
- Changes in orbitofrontal cortex and anterior cingulate cortex
- Poorer executive control and impulse control



https://www.youtube.com/watch?v=VwNY_FiwYU



<https://www.youtube.com/watch?v=26KPzJwt6wQ&list=PL5F250D3E5D945F37&index=1>



Treatment

- Currently no treatments supported by evidence
 - Not an official diagnosis
- No pharmacologic nor psychotherapeutic intervention has received adequate testing
- Shortcomings of current treatment studies of PIU.



Problematic Internet Use Treatment

Table H.6.2 Available treatment studies for Internet addiction (adapted from King et al, 2011)

STUDY (COUNTRY)	DEFINITION OF INTERNET ADDICTION	TREATMENT	NUMBER (AGE)	COMMENTS
Du et al, 2010 (China)	Beard's Diagnostic Questionnaire	8 session CBT vs control	Treatment (n = 32) vs clinical controls (n = 24). (12-17)	The only controlled study available
Han et al, 2009 (South Korea)	Young Internet Addiction Scale > 50	8 weeks of methylphenidate	62 (8-12)	All subjects in the study had comorbid ADHD
Han et al, 2010 (South Korea)	>4h/day, 30h/week; Young Internet Addiction Scale score > 50	6 weeks bupropion sustained release	19 (17-29)	Small sample size (11) and no control group
Kim, 2008 (South Korea)	Korean Internet Rating Scale	5 weeks "reality training" group counseling vs untreated controls	25 (age not reported)	Limited information (e.g., age of participants not described)
Shek et al, 2009 (Hong Kong)	Young Internet Addiction Scale; Chinese Internet Addiction Scale	15-19 months multi- modal counseling	59 (11-18)	No control group
Su et al, 2011 (China)	Young's Diagnostic Questionnaire: Internet use of 14+ hr/week	Healthy Online Self- Helping Center (Natural Environment; Learning Environment, Non- Interactive) vs Control	65 (age not reported)	Limited information (e.g., age of participants not reported)
Young, 2007 (USA)	Internet Addiction Test	12 sessions of CBT	114 (age not reported)	No control group



Problematic Internet Use

Treatment

- Family based intervention may work
- Tailored management



<https://www.youtube.com/watch?v=VtMJ4NJvTwI>



Treatment: Behavioral Strategies for Clinicians and Self-Help Tips for Patients

- Identify pattern of use with logbook
- Set clear, specific goals
- Limit and shorten Internet usage time
- Negotiate one computer free day per week
- Use reminder cards of negative consequences of Internet use
- Make a list of former hobbies or interests
- Increase time spent on sports, hobbies and other non-Internet activities
- Join PIU support group



Course and Outcome

- High relapse rate
 - Ready accessibility of Internet
 - Low awareness



Problematic Internet Use

Prevention

- Increase awareness of PIU
- Parental supervision for internet use
- Set time limits to internet use for children and adolescence under age of 18.





Problematic Internet Use

Thank You!

