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Health Tips

In the Internet age, parents have a responsibility to help children and adolescents establish healthy online habits and maintain a balance between their online and offline activities.

Trapped in the Net

Internet use has become a daily activity for many people all over the world, and Hong Kong is no exception. According to a survey conducted by the Census and Statistics Department, in 2012, about 80% of all households in Hong Kong had their personal computers at home connected to the Internet.¹ Had mobile Internet been factored in, the proportion of Internet users would be even higher. Nowadays, we need the Internet for school, for work, to check the weather, to read the news, to communicate with colleagues, to send pictures to friends, and to organise a gathering. Spending longer time online has raised concerns that excessive Internet use can amount to an addiction. Reports of domestic violence and even family tragedies that were linked to addictive Internet use have grabbed the headlines in recent years.

At the moment there are no formal, widely accepted criteria for defining Internet addiction.² The criteria more commonly used by researchers is the Internet Addiction Test developed by psychologist Dr Kimberly S. Young, which is modified from the diagnostic criteria for pathological gambling in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; the psychiatrists' diagnostic "bible").³ Despite the lack of consensus about the defining criteria, researchers generally agreed that Internet addiction is not merely spending a lot of time online. In fact, there are people who are online on the Internet all day for job and academic connections - more than they are not on the Internet, but they are not addicted. Whether people are Internet addicted is not just a question of how much time they spend online, but whether they are able to control their use and whether the use leads to marked distress and/or functional impairment in daily life.^{2,4,5} Depending on the specific Internet use that a person is addicted to, Internet addiction can be further classified into 5 types of behaviours: (a) cybersex addiction: addicted to visiting adult websites for cybersex and cyberporn, (b) cyber-relationship addiction: addicted to online relationships, (c) net compulsion: obsessive online gambling and shopping, (d) information overload: compulsive web surfing or database searches, and (e) computer game addiction: obsessive online game playing.⁶

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Internet addiction currently is not a formal psychiatric diagnosis. But to stimulate research in the area, the American Psychiatric Association has listed “Internet gaming disorder” as a condition recommended for further study for the first time in the updated edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).⁷ Nevertheless, regardless of whether Internet addiction is a psychiatric disorder, it is beyond doubt that it is a growing public health problem, especially for children and adolescents, who are vulnerable because they have limited coping skills and are more easily attracted to the Internet.⁸

Risk Factors and Health Effects of Internet Addiction in Children and Adolescents

Some individual and family characteristics of children and adolescents may predict the risk of their developing Internet addiction. For example, boys are more prone to Internet addiction than girls, and boys tend to play online games more, watch cyberporn more, and engage in online gambling more.^{9,10} On the other hand, good family functioning and positive youth development may predict a lower probability of developing Internet addiction.¹¹ It is noteworthy that surfing the Internet may serve as an inadequate stress coping strategy, and Internet addiction may just be a coping mechanism for the underlying psychological developmental issues.⁵ Evidence found associations between problematic use of Internet and psychiatric disorders, such as mood disorders, depression, obsessive-compulsive disorder, impulsive-control disorders, attention-deficit/hyperactivity disorder, and suicidal thinking and behaviour.^{10,12}

Internet addiction in children and adolescents, as well as excessive Internet use (among those not regarded as Internet addicts), may lead to adverse physical and psychosomatic symptoms.¹⁸ Epidemiological studies among children and adolescents have suggested an association between excessive Internet use with unhealthy dietary behaviours and poor diet quality (such as meal skipping and frequent snacking)^{13,14} and high use of alcohol and tobacco.¹³⁻¹⁵ Excessive Internet use is also associated with insomnia symptoms and, excessive daytime sleepiness.^{13,16,17} “Marathon” online gaming sessions have even been implicated in causing sudden deaths.¹⁰

Prevalence of Internet Addiction in Children and Adolescents

The prevalence rates of Internet addiction among younger people ranged between 0.9% and 38% worldwide.² The wide range of estimates is probably due to differences in the study populations and the adopted definitions, instruments and sampling methods.

In Hong Kong, several prevalence studies on Internet addiction among children and adolescents were conducted. Using the Young’s Chinese Internet Addiction (CIA-Young) 10-item scale, a study of over 3 500 Secondary 2 students (mean age: 13.6 years old) in school year 2010-2011 found that 26.7% of students met the criterion of Internet addiction (having four or more Internet addictive behaviours on the list) (Table 1). The percentages of students showing various Internet use behaviours on the list ranged from 11.0% (keep on using Internet even after spending too much money on online fees) to 46.6% (stay online longer than originally intended).²⁰

Likewise, using the same instrument and cut-off points, an earlier study on 6 121 Chinese students aged 11-18 years in primary and secondary

schools showed that 19.1% of the students could be Internet addicted.²¹

Table 1: Percentages of Secondary 2 students reporting “yes” to the questions in the Young’s 10-item Internet Addiction Test, 2010-2011

| Internet use behaviours | Percentage |
|---|------------|
| 1. Feeling preoccupied with the Internet or online services and think about it while off-line | 41.1% |
| 2. Feeling a need to spend more and more time online to achieve satisfaction | 31.6% |
| 3. Unable to control your online use | 23.9% |
| 4. Feeling restless or irritable when attempting to cut down or stop online use | 14.1% |
| 5. Stay online longer than originally intended | 46.6% |
| 6. Risk the loss of a significant relationship, job, or educational or career opportunity because of online use | 22.3% |
| 7. Lie to family members or friends to conceal excessive Internet use | 19.4% |
| 8. Go online to escape problems or relieve feelings such as helplessness, guilt, anxiety, or depression | 20.2% |
| 9. Showing withdrawal when offline, such as increased depression, moodiness, or irritability | 13.1% |
| 10. Keep on using Internet even after spending too much money on online fees | 11.0% |
| Classified as Internet addiction (four or more of the above behaviours) | 26.7% |

Source: Shek and Yu, 2012.

Tips for Parents about Preventing Internet Addiction in Children and Adolescents

In the Internet age, parents have a responsibility to help children and adolescents establish healthy online habits and maintain a balance between their online and offline activities. Here are some actions that parents can take:²²

- **Be a good role model.** Use the Internet sensibly. Educate your children about the negative impact of too much Internet use.
- **Have a set of rules about Internet use.** Make sure your children understand what you consider appropriate and what areas are off limits. Surfing the Internet should not be allowed to take the place of the children's other important activities, including homework, playing outside, or spending time with friends. Let them know that the rules are for their own good.
- **Put the computer at place where you can monitor your children.** Computers should never be placed where a door can be closed or a parent excluded.
- **Surf the Internet with your children.**
- **Set time limits.** Children aged under 2 should not be spending time watching TV or using electronic devices. Children and adolescents should limit recreational screen-time to 2 hours per day to allow time for more active pursuits.

Parents also need to **be aware of the behavioural changes that may indicate Internet addiction** in children and adolescents, so that necessary actions can be taken in time. Here are the signs that may deserve attention:^{23, 24}

- Spending too much time online, especially at night.
- Skipping meals or eating in front of the computer so that they can get more time online.
- Lying about the time or reasons they spend online.
- Turning off the monitor or changing the screen when you approach them.
- Withdrawing from family, friends they used to enjoy being around, or activities they once enjoyed in favor of surfing the Internet.
- Getting angry or restless if they are not allowed to use the Internet.

If children are demonstrating strong signs of Internet addiction, parents could seek help from relevant professionals such as school counsellors, social workers or family doctors. There are also some local non-governmental organisations (their websites listed in Box 1) which provide services dedicated to helping parents and young people about Internet addiction, with resources ranging from provision of information and advice, counselling, group therapies and even individual case management. Use these services in case of need.

Box 1: Local non-governmental organisations which provide services dedicated to helping parents and young people about Internet addiction

- * Tung Wah Group of Hospitals - Say No to Cyber Addiction Project website
<http://www.tungwahcsd.org/en/our-services/youth-and-family-services;category/9>
- * Hong Kong Federation of Youth Groups Youth Wellness Center
<http://ywc.hkfyg.org.hk/>
- * Caritas Hong Kong Youth and Community Service
http://ycc.caritas.org.hk/online_web/index.html
- * Hong Kong Christian Service – Online New Page Online Addiction Counselling Centre
<http://www.hkcs.org/gcb/icys/prog/online/stop-e.html>

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Data Brief

The Census and Statistics Department conducted a thematic household survey on information technology usage and penetration between June and August 2012. In this survey, some 10 000 households were successfully enumerated. Persons aged 10 and above (other than foreign domestic helpers) in each enumerated household were interviewed about their knowledge of using personal computer as well as their usage of personal computer during the 12 months before enumeration. Based on the survey results, it was estimated that some 4 347 000 persons aged 10 and above had used personal computer at least once a week during the 12 months before enumeration. Among them, 18.9% had used personal computer 50 hours and more per week. Analysed by age group, a higher proportion of people aged 25-34 (31.3%) reported that they had used personal computer 50 hours and more per week. Overall, people aged 10 and above had used personal computer for an average of 30.0 hours per week.

Persons aged 10 and above who had used personal computer at least once a week during the 12 months before enumeration by time spent in using personal computer per week and age

| Time spent in using personal computer per week (hours) | Age group | | | | | | |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|----------------------------------|
| | 10-14 No. of persons ('000) | 15-24 No. of persons ('000) | 25-34 No. of persons ('000) | 35-44 No. of persons ('000) | 45-54 No. of persons ('000) | ≥ 55 No. of persons ('000) | Overall No. of persons ('000) |
| < 20 | 178.2 (58.9%) | 224.6 (27.0%) | 197.7 (21.5%) | 279.6 (30.8%) | 347.6 (40.1%) | 291.1 (56.1%) | 1 518.9 (34.9%) |
| 20 - < 50 | 117.4 (38.8%) | 494.0 (59.3%) | 432.7 (47.1%) | 405.4 (44.7%) | 366.7 (42.3%) | 191.4 (36.8%) | 2 007.6 (46.2%) |
| ≥ 50 | 6.8 (2.2%) | 113.9 (13.7%) | 287.7 (31.3%) | 222.1 (24.5%) | 153.1 (17.7%) | 36.9 (7.1%) | 820.5 (18.9%) |
| Total | 302.4 (100.0%) | 832.6 (100.0%) | 918.1 (100.0%) | 907.1 (100.0%) | 867.4 (100.0%) | 519.3 (100.0%) | 4 347.0 (100.0%) |
| Average duration (hours) | 18.5 | 30.1 | 37.7 | 33.1 | 28.2 | 20.2 | 30.0 |

Source: Thematic Household Survey Report No. 52, Census and Statistics Department.



News Bites

Computer vision syndrome (CVS) refers to a collection of visual and musculoskeletal symptoms that are related to prolonged computer use. A local survey showed that about two-thirds of people aged 18-60 in Hong Kong had at least one visual symptom related to computer use.

The survey telephone-interviewed 670 Hong Kong adults aged 18-60 in 2010 and examined the general pattern of CVS and severity of symptoms by computer user characteristics and computer use patterns. Results showed that nearly two-thirds of respondents had at least one visual symptom related to computer use. Among computer users, 9% of males and 16% of females reported visual problems severe enough to affect their daily life. The most common vision-related complaints included tired eyes (67.7%), dry eyes (33.1%) and headache (17.8%). Besides, over 60% of computer users reported musculoskeletal symptoms, such as neck pain (49.5%), shoulder pain (47.2%) and back pain (40.8%). Increased daily computer hours, female gender, heavy text-based computer use and presence of astigmatism were associated with greater risk of CVS, whereas wearing glasses was found to be a protective factor.

In conclusion, CVS is prevalent among Hong Kong adults. To prevent and relieve eye strain, computer users should blink frequently, take regular rest breaks and look into the distance, wear appropriate glasses, and adjust text size and brightness of the monitor to a suitable level. Besides, proper seating posture and computer monitor placement (about 50-75 cm away from the eyes and at eye level or a bit lower), together with using anti-reflective screen can also help to reduce risk of CVS.

[Source: Kim J, Lo F, Lau J, et al. Prevalence and correlates of computer vision syndrome in Hong Kong. Paper presented at the American Public Health Association 140th Annual Meeting and Exposition on 30 October 2012, San Francisco, CA.]

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Non-Communicable Diseases (NCD) WATCH is dedicated to promote public's awareness of and disseminate health information about non-communicable diseases and related issues, and the importance of their prevention and control. It is also an indication of our commitments in responsive risk communication and to address the growing non-communicable disease threats to the health of our community.

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