

Is internet use unhealthy?

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For clinicians who take care of adolescents this is a recurrent question in the course of a consultation, usually raised by parents. Who has never come across parents' feelings of powerlessness regarding this issue?

Much has been written on adolescent internet overuse.

The internet is undoubtedly a tool providing unique opportunities for communication, entertainment and education. Regular internet use has become a normative behaviour without major health consequences. However, there is a darker side to the internet. While most adolescents use the internet without significant problems, some do have dysfunctional ways of using it, mostly through overuse and misuse. In the extreme, dysfunctional internet users show an addiction-like pattern, leading to isolation and neglect of social, academic and recreational activities, and personal health. Further studies are needed to investigate the specifics of this pattern in more depth.

Internet addictive behaviour (IAB) is defined as a behavioural pattern characterised by loss of control over internet use, meaning an individual's inability to control their internet use, leading to feelings of distress and dysfunctional impairment of daily activities [1].

IAB has received growing research attention and various terms have been used to describe it: "excessive", "problematic", "pathological". Does this behavioural pattern constitute a real addiction?

In fact, some of the symptoms of IAB share similarities with behavioural addictions and correspond to diagnostic criteria for impulse control disorders such as pathological gambling.

In the scientific literature, estimates of IAB prevalence among adolescents vary greatly among European countries. A possible explanation for the difficulty in establishing prevalence rates is the lack of uniform diagnostic criteria, adding more methodological difficulties for research in this field.

In May 2013, the American Psychiatric Association issued the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) [2]. During the whole development process of this edition it was very interesting to see the vivid discussions that took place regarding whether the so-called internet addiction should be considered as a diagnosis. Finally, in the new edition, Internet Gaming Disorder has been identified under "Conditions for further study", meaning a condition warranting more clinical re-

search and experience before it might be considered for inclusion as a formal disorder, but internet addiction has not been included so far.

Anyway, there seems to be a growing awareness that IAB is emerging as a valid construct of a distinct psychiatric condition.

In Swiss Medical Weekly there is currently a paper entitled "Is internet use unhealthy? A cross-sectional study of adolescent Internet overuse" [3]. Suris et al., using a representative sample of 36 schools in a French-speaking canton in Switzerland, were able to confirm that problematic internet users presented more frequently with health problems (even after controlling for confounding factors) and that among those, lack of sleep is the most strongly associated and seems to act as mediator.

Numerous studies have already shown this association between problematic internet use and sleep-related problems, including lack of sleep, excessive daytime sleepiness or insomnia [4-9].

In a very interesting research article published in 2010, Bélanger et al., also using a Swiss sample, but in this case a nationally representative sample of adolescents, provided evidence of a U-shaped relationship between intensity of internet use and poorer mental health, with both occasional and heavy internet users at increased risk for somatic health problems compared to regular users [10].

Problematic internet use has already been considered as an indicator to screen for substance use [11]. Longitudinal data is needed, however, to better understand this causal relationship as it is not clear what comes first. An association with depressive symptoms has also been identified [12]. Further research is needed to corroborate the existing evidence of co-morbidity between these two conditions.

Chahal et al. have shown that access to and night-time use of electronic entertainment and communication devices (EECDs) such as video games, computers, and smart phones are associated with shortened sleep duration, excess body weight, poorer diet quality, and lower physical activity levels [13]. Their findings are in line with the existing recommendations by the American Academy of Pediatrics on restricted availability of TV, video games and smart phones in children's bedrooms [14], and suggest that limiting the availability of EECDs in children's bedrooms and discouraging their night-time use may be a good strategy not only to promote sleep but also to reduce obesity.

Most adolescent medicine physicians use the HEADSSS acronym as an interview tool. The latest version already includes an extra S standing for “sleep”, and an extra E for “eating”. My advice is that we add a third E for “Excessive Internet use”.

Clinicians should routinely screen every adolescent for excessive internet use: not only those who are complaining of sleep-related problems, somatic complaints or are overweight or substance users! Moreover, clinicians should spend more time and energy discussing these issues with the adolescents and their parents, finding ways together for limiting the amount of time spent online for leisure activities and the number of devices used to connect to the Internet, especially those at their disposal in the bedroom.

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