

## PROBLEMATIC INTERNET USE: THE HEALTHY BRAIN NETWORK STUDY |

### The Child Mind Institute's Healthy Brain Network study finds a connection between PIU and both depression and ADHD.

Problematic internet use (PIU) is a way to describe excessive and impairing online behavior, found in approximately 4% of youth aged 11 to 17.<sup>1</sup> The Child Mind Institute's Healthy Brain Network community study finds a connection between PIU and both depression and ADHD. The study did not find a clear link between excessive internet use and anxiety, which has been previously reported.<sup>2</sup>

#### The Healthy Brain Network

The Child Mind Institute Healthy Brain Network is a community study collecting data from 10,000 children and adolescents in the New York City metropolitan area to better understand mental health and learning disorders in this population. The study is building the largest, most comprehensive data resource on the developing brain by collecting brain images and psychiatric, behavioral, genetic, environmental and lifestyle information. In the process, children receive no-cost evaluations and referrals for treatment.

#### Summary of findings on PIU

An analysis of a subset of the Healthy Brain Network dataset (564 participants aged 7 to 15, with an average age of 11) provides empirical evidence for links between PIU and depressive disorders and attention-deficit hyperactivity disorder (ADHD). These consistent and significant associations are present in both the self-report and parent report. Surprisingly, perhaps because of the young average age of participants, this study does not show clear links between PIU and physical fitness.

#### Determining PIU

The Internet Addiction Test (IAT) is administered to Healthy Brain Network participants. Sample questions include:

- How often do you find that you stay online longer than you intended?
- How often do you form new relationships with fellow users?
- How often do others in your life complain to you about the amount of time you spend online?
- How often do you lose sleep due to being online?
- How often do you choose to spend more time online over going out with others?

#### Excessive time online leads to functional impairment

In the study, impairment is determined by a test called the Columbia Impairment Scale. This test asks questions about thoughts and feelings, making friends, school performance and how kids spend their time. The study finds that problematic internet use predicts impairment, even when accounting for the impairment of a co-occurring (or "co-morbid") mental health disorder. If a teen has PIU and ADHD, for instance, the study finds that even when we factor out the impairment of the ADHD, PIU still interferes with a child's day-to-day activities all on its own.

#### PIU and sleep

In the study, excessive internet use was linked to sleep disturbances, even after accounting for lifestyle and the effects

of ADHD and depression. This suggests that internet use may directly influence sleep behavior or vice versa.

#### No evidence of a link to anxiety

The study does not confirm earlier research linking PIU and anxiety symptoms. Researchers have theorized that individuals with anxiety, particularly social anxiety, use online relationships to compensate for poor real-life ones in a similar way as posited for individuals suffering from depression. However, many of these previous studies did not account for co-morbidity with ADHD and depression.

### INTERNET USE ISN'T JUST PROBLEMATIC FOR TEENS



The average age in the study is less than 11 years old. It shows that youth this age may be negatively affected by PIU, and highlights the importance of exploring the effects of the internet in younger groups.