Prefrontal symptoms associated with the problematic use of information and communication technologies (ICTs) in adolescents (pp. 257-273)

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Abuse of information and communication technologies (ICTs) can be linked to a malfunction of the prefrontal cortex. Loss of control over the use behavior of these technologies can be reflected in failures in everyday activities. Adolescents make up a particularly vulnerable population, as they are in a critical phase of brain development. A descriptive observational multicenter cross-sectional study was designed in public, subsidized and private schools in the city of Madrid, obtaining a representative sample (n= 2,341) of the population enrolled in the last year of obligatory secondary education, stratified by level of district development and school financing. The prevalence observed for the problematic use of ICT ranges from 18.2% for video games to 36.5% for the Internet. There is a linear relationship between ICT abuse and daily symptoms of prefrontal malfunction. Although it was not possible to determine whether prefrontal dysfunction is a cause or consequence of ICT abuse, the data suggest that it is closely linked to a loss of behavioral control.