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PSYCHIATRY ACADEMY

# Internet, Social Media and Gaming Addiction

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# Disclosures



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I have the following relevant financial relationship with a  
commercial interest to disclose:

Consultant at Gaimcontrol designing app to treat gambling disorder



# Important Preface

- Digital technology is NOT all negative
- There ARE potential positive impacts





# Differences Gaming Disorder and Internet Gaming Disorder

- Internet Gaming Disorder: preoccupation, withdrawal, tolerance, unsuccessful attempts to stop/limit, loss of interests due to gaming, continued use despite harm, deception, escape, and loss relationship/harm in school or occupation. At least 5 of these criteria must be met in a 12 month period
- Gaming Disorder: a) impaired control (e.g., failed attempts to cut or diminish gaming involvement; gaming performed in a more prolonged or intensive way than planned); b) an increasing priority given to gaming to the extent that it takes precedence over other life interests and daily activities; and c) a continued involvement in gaming despite negative consequences for the individual and his/her acquaintances. Gaming pattern must be either continuous or episodic and recurrent, be manifested over an extended period of time (> 12 months), and cause psychological distress or significant impairment in personal, family, social, professional, and/or other important areas of functioning



# Other Digital Addictions

- Not currently included in DSM or ICD
- Unclear definition impacts measurement
- Efforts being made to determine consistent definition
- Primarily treated utilizing CBT or family therapy
- Systemic reviews/meta's indicate potential of CBT in treating digital addictions



# Prevalence

- Around 3.05% Gaming Disorder
- Around 2.47% Internet Gaming Disorder
- Much higher rates of problem use amongst all types of digital devices:  
26.99% smart phone addiction, 17.42% social media addiction,  
14.22% internet addiction, 8.23% cybersex addiction



# Comorbidity/Associated Factors

- Internet Gaming Disorder: General health, Major Depressive Disorder, ADHD, OCD
- Gaming Disorder: ADHD
- Both: Depression, Anxiety, OCD, Somatization, ASD
- Associations brain regions and brain states



# Diagnosis/Assessment

- Review 2020 King et al. evaluated 32 tools
- 5 scales found about equally methodologically strong
- IGDT10 by Király et al. (2019) suggested as first choice GD/IGD
- Useful for children, adolescents, and adults
- Digital addiction tools less researched
- Digital Addiction Scale or Young Internet Addiction Test recommended with caution for assessing digital addictions



# Treatment

- Studies and meta-analyses indicate CBT has shown efficacy in reducing symptoms of Internet Gaming Disorder
- Mindfulness/Meditation can improve tx outcomes
- One systemic review more negative regarding treatment outcomes
- Some medications potentially helpful (Wellbutrin/Escitalopram)
- One internet addiction meta found rTMS and CBT most effective tx's
- Additional research needed



# Recommendations for Patients

- Ask 1-2 screening questions about technology use
- Provide IGDT-10, DAS, or GDS for parents if patient/caretakers answer yes to either screening question
- Take MI approach if patient or their caretakers are in precontemplation
- Have resources ready to provide patients/caretakers if needed
- If patient open to meds, consider Wellbutrin first, with escitalopram as secondary option



# Resources List

- <https://www.escapingthe.com/resources> Good list of resources, including treatment settings, therapists, resources for parents, books, etc
- <https://olganon.org/home> 12 step group for “Online gamers”
- <https://internetaddictsanonymous.org/> 12 step group for “Internet and Technology addicts”
- <https://www.cgaa.info/> 12 step group for “Computer Gaming addicts”
- <https://www.video-game-addiction.org/> Additional helpful resources here
- <https://www.psychologytoday.com/> Website for finding therapists/psychiatrists
- <https://www.psychiatry.org/patients-families/internet-gaming> Resource for parents and links for therapy or psychiatrists



# Resources Continued

- [reSTART](#)—The nation's first center specializing in the treatment of problematic internet, video game and technology use
- <https://www.childrenshospital.org/programs/clinic-interactive-media-and-internet-disorders-cimaid> Boston Children's Hospital outpatient treatment program for “interactive media and internet disorders.”
- <https://www.massgeneral.org/psychiatry/treatments-and-services/addiction-recovery-management-service/digital-addiction-gambling> MGH outpatient treatment setting for IGD, GD, and other digital addictions
- <https://omegarecovery.org/> Treatment program in Texas for tech addictions, but also includes other substance use disorder patients



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# References

- Al-Mamun, F., Hasan, M.E., Mostofa, N.B. *et al.* Prevalence and factors associated with digital addiction among students taking university entrance tests: a GIS-based study. *BMC Psychiatry* **24**, 322 (2024). <https://doi.org/10.1186/s12888-024-05737-9>
- American Psychiatric Association, 2013. Diagnostic and Statistical Manual of Mental Disorders, 5th edition.
- Browne, D. T., May, S. S., Colucci, L., Hurst-Della Pietra, P., Christakis, D., Asamoah, T., ... & Prime, H. (2021). From screen time to the digital level of analysis: a scoping review of measures for digital media use in children and adolescents. *BMJ open*, *11*(5), e046367.
- Cemiloglu, D., Almourad, M. B., McAlaney, J., & Ali, R. (2022). Combatting digital addiction: Current approaches and future directions. *Technology in Society*, *68*, 101832.
- Ding K, Li H. Digital Addiction Intervention for Children and Adolescents: A Scoping Review. *International Journal of Environmental Research and Public Health*. 2023; 20(6):4777. <https://doi.org/10.3390/ijerph20064777>
- Dullur P, Krishnan V, Diaz AM. A systematic review on the intersection of attention-deficit hyperactivity disorder and gaming disorder. *J Psychiatr Res*. 2021 Jan;133:212-222. doi: 10.1016/j.jpsychires.2020.12.026. Epub 2020 Dec 11. PMID: 33360866.
- Fisher, S. (1994). Identifying video game addiction in children and adolescents. *Addictive Behaviors*, *19*, 545–553.
- Han, D. H., Lee, Y. S., Na, C., Ahn, J. Y., Chung, U. S., Daniels, M. A., Haws, C. A., & Renshaw, P. F. (2009). The effect of methylphenidate on internet video game play in children with attention-deficit/hyperactivity disorder. *Comprehensive Psychiatry*, *50*(3), 251–256. <https://doi.org/10.1016/j.comppsy.2008.08.011>
- Han, Doug & Hwang, Jun & Renshaw, Perry. (2010). Bupropion Sustained Release Treatment Decreases Craving for Video Games and Cue-Induced Brain Activity in Patients With Internet Video Game Addiction. *Experimental and clinical psychopharmacology*. *18*. 297-304. 10.1037/a0020023.
- Han, D. H., & Renshaw, P. F. (2012). Bupropion in the treatment of problematic online game play in patients with major depressive disorder. *Journal of psychopharmacology (Oxford, England)*, *26*(5), 689–696. <https://doi.org/10.1177/0269881111400647>
- Han J, Seo Y, Hwang H, Kim SM, Han DH. Efficacy of cognitive behavioural therapy for internet gaming disorder. *Clin Psychol Psychother*. 2020 Mar;27(2):203-213. doi: 10.1002/cpp.2419. Epub 2020 Jan 22. PMID: 31881100.
- Hawi, N. S., Samaha, M., & Griffiths, M. D. (2019). The digital addiction scale for children: Development and validation. *Cyberpsychology, Behavior, and Social Networking*, *22*(12), 771-778.



# References #2

- Kesici, A., & Tunç, N. F. (2018). The Development of the Digital Addiction Scale for the University Students: Reliability and Validity Study. *Universal Journal of Educational Research*, 6(1), 91-98.
- King DL, Chamberlain SR, Carragher N, Billieux J, Stein D, Mueller K, Potenza MN, Rumpf HJ, Saunders J, Starcevic V, Demetrovics Z, Brand M, Lee HK, Spada M, Lindenberg K, Wu AMS, Lemenager T, Pallesen S, Achab S, Kyrios M, Higuchi S, Fineberg NA, Delfabbro PH. Screening and assessment tools for gaming disorder: A comprehensive systematic review. *Clin Psychol Rev*. 2020 Apr;77:101831. doi: 10.1016/j.cpr.2020.101831. Epub 2020 Feb 11. PMID: 32143109.
- Kim, J., Lee, S., Lee, D., Shim, S., Balva, D., Choi, K. H., Chey, J., Shin, S. H., & Ahn, W. Y. (2022). Psychological treatments for excessive gaming: a systematic review and meta-analysis. *Scientific reports*, 12(1), 20485. <https://doi.org/10.1038/s41598-022-24523-9>
- Kiraly, O., Toth, D., Urban, R., Demetrovics, Z., & Maraz, A. (2017). Intense video gaming is not essentially problematic. *Psychology of Addictive Behaviors*, 31, 807–817.
- Király O, Bóthe B, Ramos-Diaz J, Rahimi-Movaghar A, Lukavska K, Hrabec O, Miovsky M, Billieux J, Deleuze J, Nuyens F, Karila L, Griffiths MD, Nagygyörgy K, Urbán R, Potenza MN, King DL, Rumpf HJ, Carragher N, Demetrovics Z. Ten-Item Internet Gaming Disorder Test (IGDT-10): Measurement invariance and cross-cultural validation across seven language-based samples. *Psychol Addict Behav*. 2019 Feb;33(1):91-103. doi: 10.1037/adb0000433. Epub 2018 Dec 27. PMID: 30589307.
- Liao Z, Huang Q, Huang S, Tan L, Shao T, Fang T, Chen X, Lin S, Qi J, Cai Y and Shen H (2020) Prevalence of Internet Gaming Disorder and Its Association With Personality Traits and Gaming Characteristics Among Chinese Adolescent Gamers. *Front. Psychiatry* 11:598585. doi: 10.3389/fpsy.2020.598585
- Männikkö N, Ruotsalainen H, Miettunen J, Pontes HM, Käätäinen M. Problematic gaming behaviour and health-related outcomes: A systematic review and meta-analysis. *J Health Psychol*. 2020 Jan;25(1):67-81. doi: 10.1177/1359105317740414. Epub 2017 Dec 1. PMID: 29192524.
- Meng, S. Q., Cheng, J. L., Li, Y. Y., Yang, X. Q., Zheng, J. W., Chang, X. W., Shi, Y., Chen, Y., Lu, L., Sun, Y., Bao, Y. P., & Shi, J. (2022). Global prevalence of digital addiction in general population: A systematic review and meta-analysis. *Clinical psychology review*, 92, 102128. <https://doi.org/10.1016/j.cpr.2022.102128>
- Ostinelli EG, Zangani C, Giordano B, Maestri D, Gambini O, D'Agostino A, Furukawa TA, Purgato M. Depressive symptoms and depression in individuals with internet gaming disorder: A systematic review and meta-analysis. *J Affect Disord*. 2021 Apr 1;284:136-142. doi: 10.1016/j.jad.2021.02.014. Epub 2021 Feb 5. PMID: 33592432.
- Pan YC, Chiu YC, Lin YH. Systematic review and meta-analysis of epidemiology of internet addiction. *Neurosci Biobehav Rev*. 2020 Nov;118:612-622. doi: 10.1016/j.neubiorev.2020.08.013. Epub 2020 Aug 25. PMID: 32853626.
- Paschke, K., Sack, P. M., & Thomasius, R. (2021). Validity and Psychometric Properties of the Internet Gaming Disorder Scale in Three Large Independent Samples of Children and Adolescents. *International journal of environmental research and public health*, 18(3), 1095. <https://doi.org/10.3390/ijerph18031095>



# References #3

- Pornnoppadol, C., Ratta-apha, W., Chanpen, S., Wattananond, S., Dumrongrungruang, N., Thongchoi, K., Panchasilawut, S., Wongyuen, B., Chotivichit, A., Laothavorn, J., & Vasupanrajit, A. (2018). A Comparative Study of Psychosocial Interventions for Internet Gaming Disorder Among Adolescents Aged 13–17 Years. *International Journal of Mental Health and Addiction*, 1-17.
- Schettler L, Thomasius R, Paschke K. Neural correlates of problematic gaming in adolescents: A systematic review of structural and functional magnetic resonance imaging studies. *Addict Biol*. 2021 Sep 8:e13093. doi: 10.1111/adb.13093. Epub ahead of print. PMID: 34496459.
- Seema, R., Heidmets, M., Konstabel, K., & Varik-Maasik, E. (2021). Development and Validation of the Digital Addiction Scale for Teenagers (DAST). *Journal of Psychoeducational Assessment*, 40(2), 293-304. <https://doi.org/10.1177/07342829211056394> (Original work published 2022)
- Song J, Park JH, Han DH, Roh S, Son JH, Choi TY, Lee H, Kim TH, Lee YS. Comparative study of the effects of bupropion and escitalopram on Internet gaming disorder. *Psychiatry Clin Neurosci*. 2016 Nov;70(11):527-535. doi: 10.1111/pcn.12429. Epub 2016 Oct 27. PMID: 27487975.
- Stevens MW, Dorstyn D, Delfabbro PH, King DL. Global prevalence of gaming disorder: A systematic review and meta-analysis. *Aust N Z J Psychiatry*. 2021 Jun;55(6):553-568. doi: 10.1177/0004867420962851. Epub 2020 Oct 7. PMID: 33028074.
- van Rooij, A.J.E., Ferguson, C.J.E., Colder Carras, M., Kardefelt-Winther, D., Shi, J., Aarseth, E.E., et al., 2018. A weak scientific basis for gaming disorder: let us err on the side of caution. *J. Behav. Addict.* 7, 1–9. <https://doi.org/10.1556/2006.7.2018.19>.
- World Health Organization, 2018. International Classification of Diseases for Mortality and Morbidity Statistics (11th Revision). Retrieved from. <https://icd.who.int/browse11/l-m/en>.
- Yan H, Li Q, Yu K, Zhao G. Large-scale network dysfunction in youths with Internet gaming disorder: a meta-analysis of resting-state functional connectivity studies. *Prog Neuropsychopharmacol Biol Psychiatry*. 2021 Jul 13;109:110242. doi: 10.1016/j.pnpbp.2021.110242. Epub 2021 Jan 9. PMID: 33434637.
- Young, K. S. (1996). Psychology of computer use: XL. Addictive use of the Internet: a case that breaks the stereotype. *Psychological reports*, 79(3), 899-902.
- Young, K. S. (1998). *Caught in the net : how to recognize the signs of Internet addiction--and a winning strategy for recovery*. J. Wiley.
- Zajac, K., Ginley, M. K., & Chang, R. (2020). Treatments of internet gaming disorder: A systematic review of the evidence. *Expert Review of Neurotherapeutics*, 20(1), 85–93. <https://doi.org/10.1080/14737175.2020.1671824>
- Zhu, Y., Chen, H., Li, J., Mei, X., & Wang, W. (2023). Effects of different interventions on internet addiction: a systematic review and network meta-analysis. *BMC psychiatry*, 23(1), 921.