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When #PlayApartTogether Takes a Dark Turn

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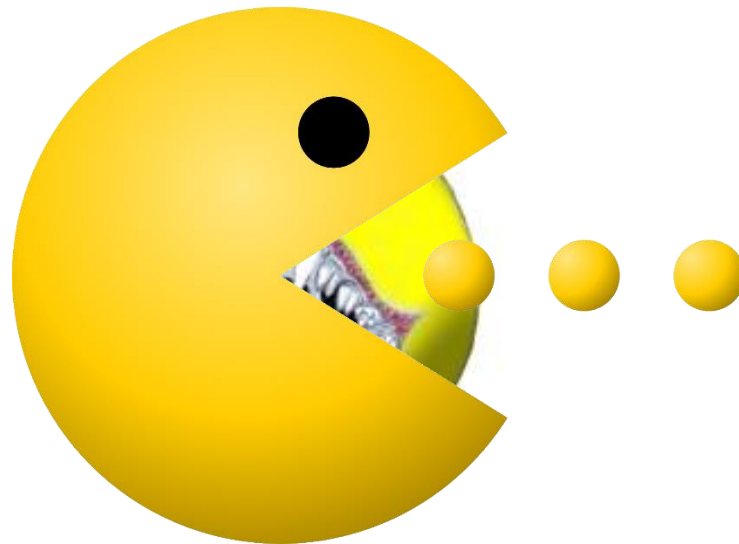
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When #PlayApartTogether Takes a Dark Turn



Disclosures

- I am the associate editor-in-chief of *Advances in Clinical Medical Research and Healthcare Delivery*, RRH's medical journal.
- I am the associate editor-in-chief of *Journal of Community Hospital Internal Medicine Perspectives*.
- I receive no compensation for either position and have no conflicts of interest to disclose.



Agenda

- Review goals of morbidity & mortality
- Historical unknown introduced
- Case presentation
- Rise of E-Gaming as a Sport
- Some internet-related activities and
- Fishbone analysis
- Panelist Q & A
- Historical unknown...revealed!

But, if you really want to read a fun, quick article on this, check out:

JOURNAL OF COMMUNITY HOSPITAL INTERNAL MEDICINE PERSPECTIVES
2021, VOL. 11, NO. 1, 39-41
<https://doi.org/10.1080/20009666.2020.1837412>



OPEN ACCESS [Check for updates](#)

YouTube as a source of information on the COVID-19 pandemic

Reynold Andika^a, Chien T. Kao^a, Christopher Williams, Young J. Lee^a, Hassan Al-Battah^a and Richard Alweis^{ib}

Disclaimer: Cyberbullying and spreading of rumors or disinformation are beyond the scope of this conference

Goals of Morbidity & Mortality Conference

- Promote “just culture”
 - Objective non-judgmental review of adverse outcomes
 - Engage in systematic process evaluation while maintaining individual accountability
- Demonstrate understanding of the recognition and management of the disease state

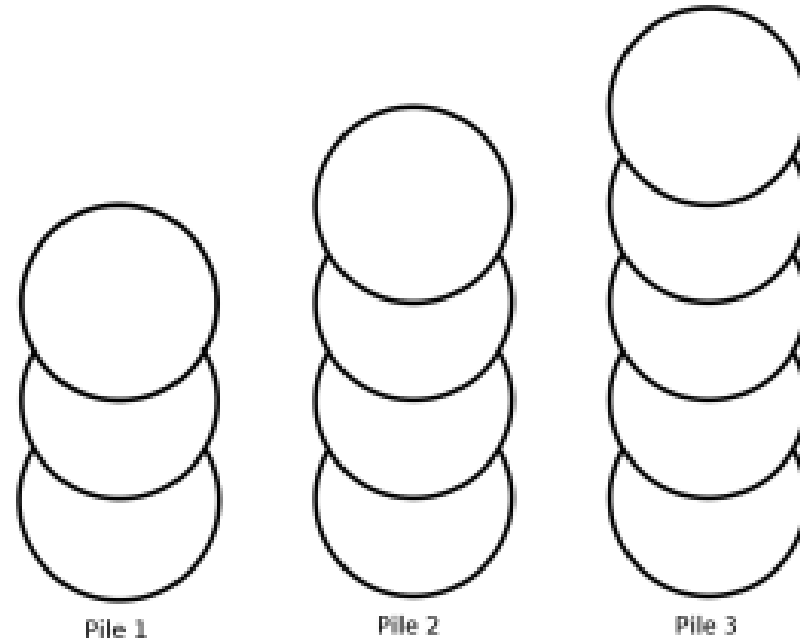




Historical Unknown

It's not a person, but a thing....

- 2 player mathematical strategy game
- Players take turns removing objects from distinct piles; there are usually at least 3 piles of varying sizes
- On each turn, a player must remove at least one object from a single pile; you can take the whole pile
- Depending on the version, the goal is either to avoid taking or to take the last object

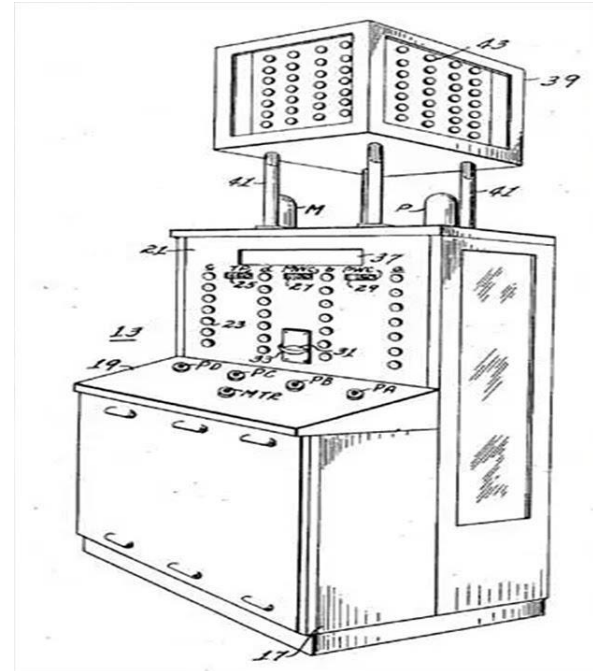


It's not a person, but a thing....

- 16th Century

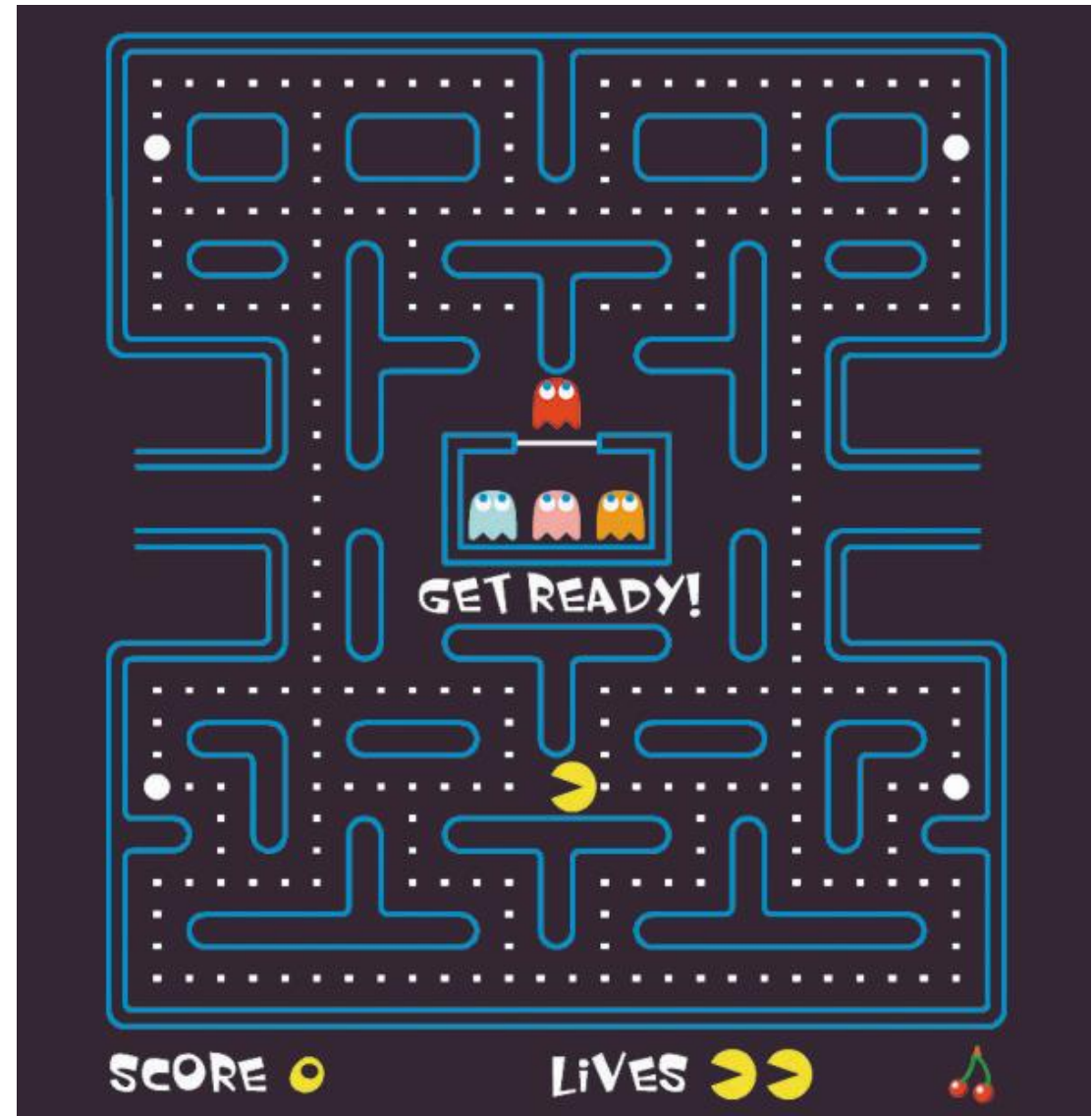
- 1901

- 1940



The [Redacted] in 1940

Case Presentation



Office Visit

- 34 yo Caucasian male presents to PCP with difficulty concentrating and increased time spent playing video games.
- Endorses 14 hrs/day of gaming, beginning to affect his work in IT (pre-COVID, 2 hrs /day)
- Prior to pandemic, socialized weekly with friends; now, due to not being vaccinated, interacts only through online gaming
 - Patient believes COVID vaccine conspiracy theory regarding Bill Gates and will not consider vaccination

Office Visit

- PMH:
 - Obesity
 - Type 2 DM (on metformin)
 - Depression and Anxiety
 - Frequently takes himself off treatment for depression and anxiety
 - Previously successfully treated with bupropion and paroxetine
 - MVA at age 12 with skull fracture, TBI, prolonged coma; since that time, reports difficulty concentrating

- SHX: no EtOH, drugs of abuse, no TOB, lives in parents' basement

Office Visit

- Depressed-appearing affect
 - BMI: 46.2 kg/m²
 - Rest of vitals normal, as was remainder of physical exam
 - PHQ9 score 13
 - GAD7 score 7
-
- Recent labwork: HgA1C 7.3%, TSH WNL

List of Colleges with Varsity Esports Programs



The Growth of E-Gaming as a Sport

E-gaming as a Sport

- Big Business -- \$2.3 billion market

E-Sports Stadium in Arlington, Texas
 Seats: 2500



Championship	2014 Viewers (in millions)	2021 Viewers (in millions)
Stanley Cup	5	2.41
World Series	13.8	9.78
NBA Finals	15.5	9.91
League of Legends	27	78.6

661.16 million hours of logged watch time



Copper Box Arena in London, England
 Seats: 7500

E-gaming as a Sport

- 2014: 1st scholarship varsity e-sports team established at Robert Morris University (Illinois)
- 2016: 1st Division 1 varsity e-sports team at Miami (Ohio) University
- NACE (National Association of Collegiate E-sports)



Internet-Related Activities and COVID-19

- 1) Smartphone Usage
- 2) Gambling
- 3) Pornography
- 4) Gaming

Hypothetical Positives of Internet Gaming

- Release emotions
- Stress reduction and safer than alcohol, drugs, or overeating
- Escapism from difficult realities
- Social opportunities, reducing loneliness



Smartphone Usage During COVID

- Smartphone stimuli
- 6 hours and 42 minutes per day
- 52.9% of adults 18-29 years of age meet problematic usage criteria with 10-44% estimated to have frank addiction



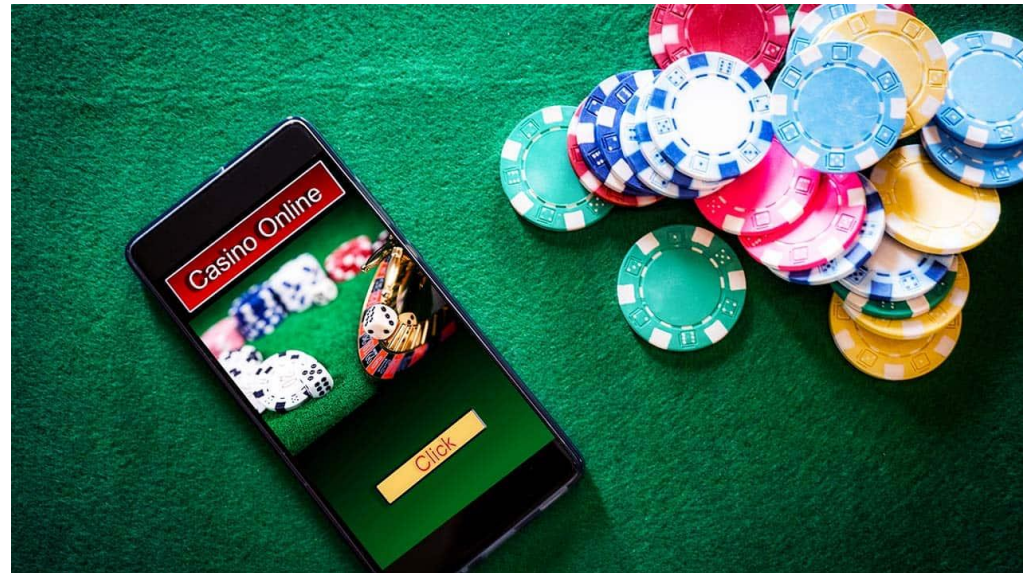
Masaeli N, Farhadi H. Prevalence of internet-based addictive behaviors during COVID-19 pandemic: a systematic review. *Journal of Addictive Diseases* 2021; 39(4):468-88.

David N. Greenfield, Treatment Considerations in Internet and Video Game Addiction: A Qualitative Discussion, *Child and Adolescent Psychiatric Clinics of North America*, Volume 27, Issue 2, 2018, Pages 327-344,

Online Gambling

Prevalence

Risk Factors



Masaeli N, Farhadi H. Prevalence of internet-based addictive behaviors during COVID-19 pandemic: a systematic review. *Journal of Addictive Diseases* 2021; 39(4):468-88.

Håkansson A, Sundvall A, Lyckberg A. Effects of a National Preventive Intervention Against Potential COVID-19-Related Gambling Problems in Online Gamblers: Self-Report Survey Study. *JMIR Form Res.* 2022 Mar 9;6(3):e33066

Online Gambling

- Online gambling linked to mental health outcomes, substance use, and problematic gambling
- Specific concerns regarding gambling during pandemic
- Online gambling increased slightly, amount of money spent on it did not

Masaeli N, Farhadi H. Prevalence of internet-based addictive behaviors during COVID-19 pandemic: a systematic review. *Journal of Addictive Diseases* 2021; 39(4):468-88.

Håkansson A, Sundvall A, Lyckberg A. Effects of a National Preventive Intervention Against Potential COVID-19-Related Gambling Problems in Online Gamblers: Self-Report Survey Study. *JMIR Form Res.* 2022 Mar 9;6(3):e33066

Online Pornography During COVID



Masaeli N, Farhadi H. Prevalence of internet-based addictive behaviors during COVID-19 pandemic: a systematic review. *Journal of Addictive Diseases* 2021; 39(4):468-88.

Grubbs, J.B.; Perry, S.L.; Weinandy, J.T.G.; Kraus, S.W. Pornemic? A longitudinal study of pornography use before and during the COVID-19 pandemic in a nationally representative sample of Americans. *Arch. Sex. Behav.* 2021, 51, 123–137.

Caponnetto P, Maglia M, Prezzavento GC, Pirrone C. Sexual Addiction, Hypersexual Behavior and Relative Psychological Dynamics during the Period of Social Distancing and Stay-at-Home Policies Due to COVID-19. *International Journal of Environmental Research and Public Health.* 2022; 19(5):2704

Internet Gaming Disorder



Gaming and COVID

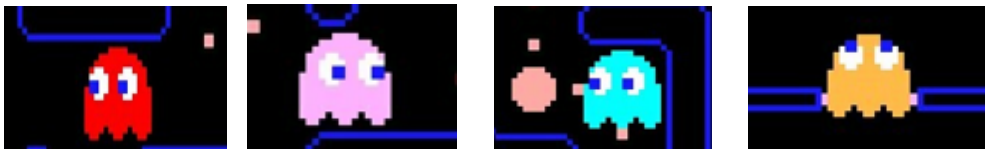
- #HealthyAtHome
- #PlayApartTogether
- The encouragement and expansion of playing video games may have led to the unintentional consequence of increasing the prevalence of IGD as IGD has been postulated to be a maladaptive response to stress
- Certain game genres are associated with higher rates of problematic internet usage:
 - FPS (first person shooters)
 - RPG, particularly MMORPGs (Massively Multiplayer Online Role-Playing Games)
 - Online casinos



IGD – What is it?

W. Barlow Soper
Mark J. Miller

Junk-Time Junkies: An Emerging Addiction Among Students



Blinky

Pinky

Inky

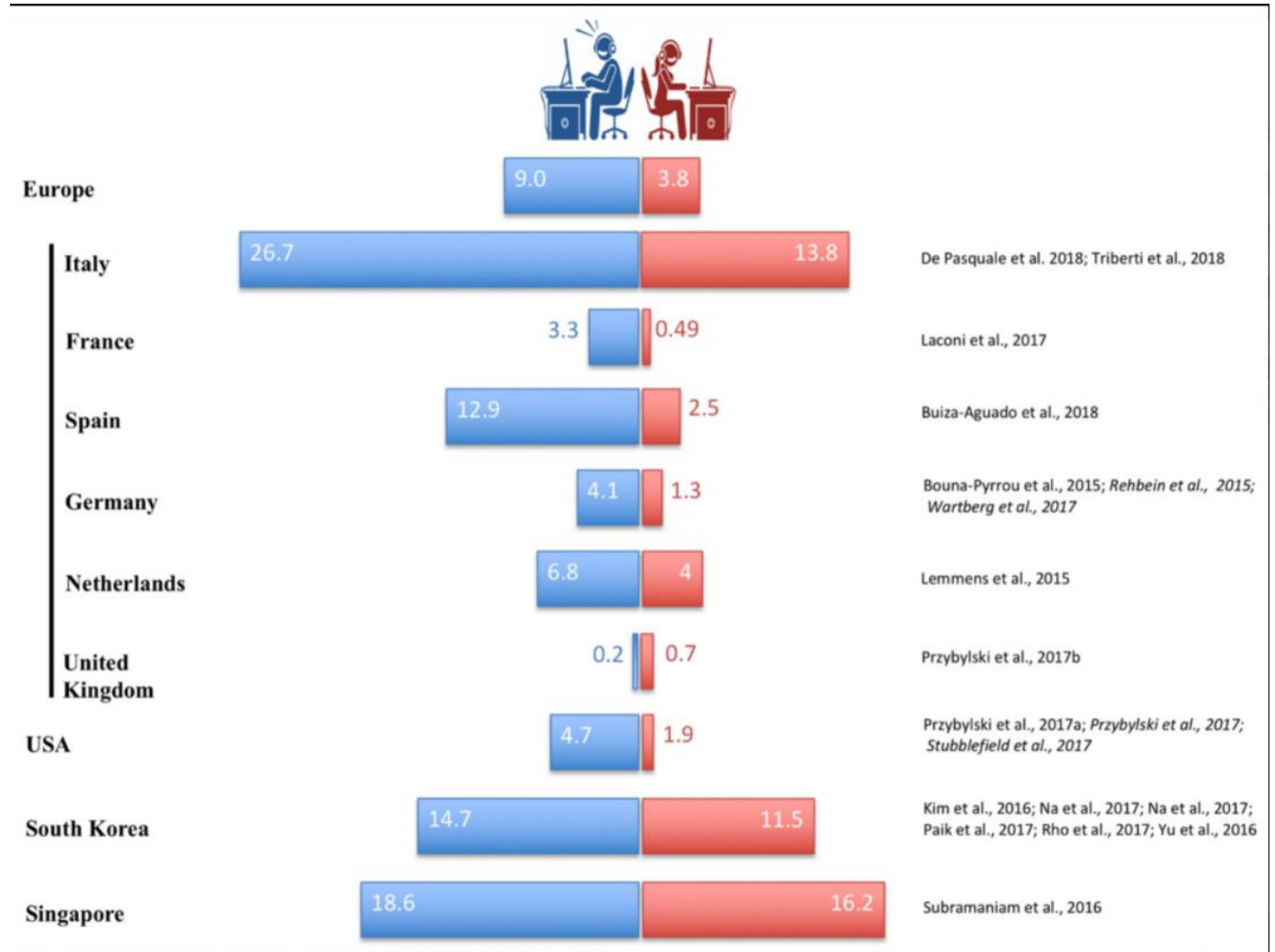
Clyde



From: Soper, W. Barlow, and Mark J. Miller. "Junk-Time Junkies: An Emerging Addiction Among Students." *The School Counselor* 31, no. 1 (1983): 40–43. <http://www.jstor.org/stable/23900931>.

IGD – How common is it?

- Different diagnostic instruments used, which makes calculating prevalence difficult
- Pre-COVID, studies using DSM-5 criteria found widely variable prevalences around the world



From: Marraudino M, Bonaldo B, Vitiello B, Bergui GC, Panzica G. Sexual Differences in Internet Gaming Disorder (IGD): From Psychological Features to Neuroanatomical Networks. *Journal of Clinical Medicine*. 2022; 11(4):1018.

Leonhardt, M.; Overa, S. Are There Differences in Video Gaming and Use of Social Media among Boys and Girls?— A Mixed Methods Approach. *Int. J. Environ. Res. Public Health* 2021, 18, 6085

IGD – How common is it?

- Studies done during COVID were all small cross-sectional:

Study	Country	Population	Mean Age (standard deviation)
Balhara et al	India	393	19.6 (1.9)
Higuchi et al	Japan	80	18.9 (6.4)
Sundaray et al	India	30	Only reported as 18+

- Key findings
 - **Prevalence roughly 50%**
 - Positives: generally viewed by patients as effective at reducing stress
 - Negatives: significant increases in reports of loneliness and panic attacks

Balhara YPS, Kattula D, Singh S, Chukkali S, Bhargava R. Impact of lockdown following COVID-19 on the gaming behavior of college students. *Indian Journal of Public Health*. 2020; 64(6):172

Higuchi S, Mihara S, Kitayuguchi T, Miyakoshi H, Ooi M, Maezono M, Nishimura K, Matsuzaki T. Prolonged use of internet and gaming among treatment seekers arising out of social restrictions related to COVID-19 pandemic. *Psychiatry Clinic Neurosci*. 2020; 74(11):607-8

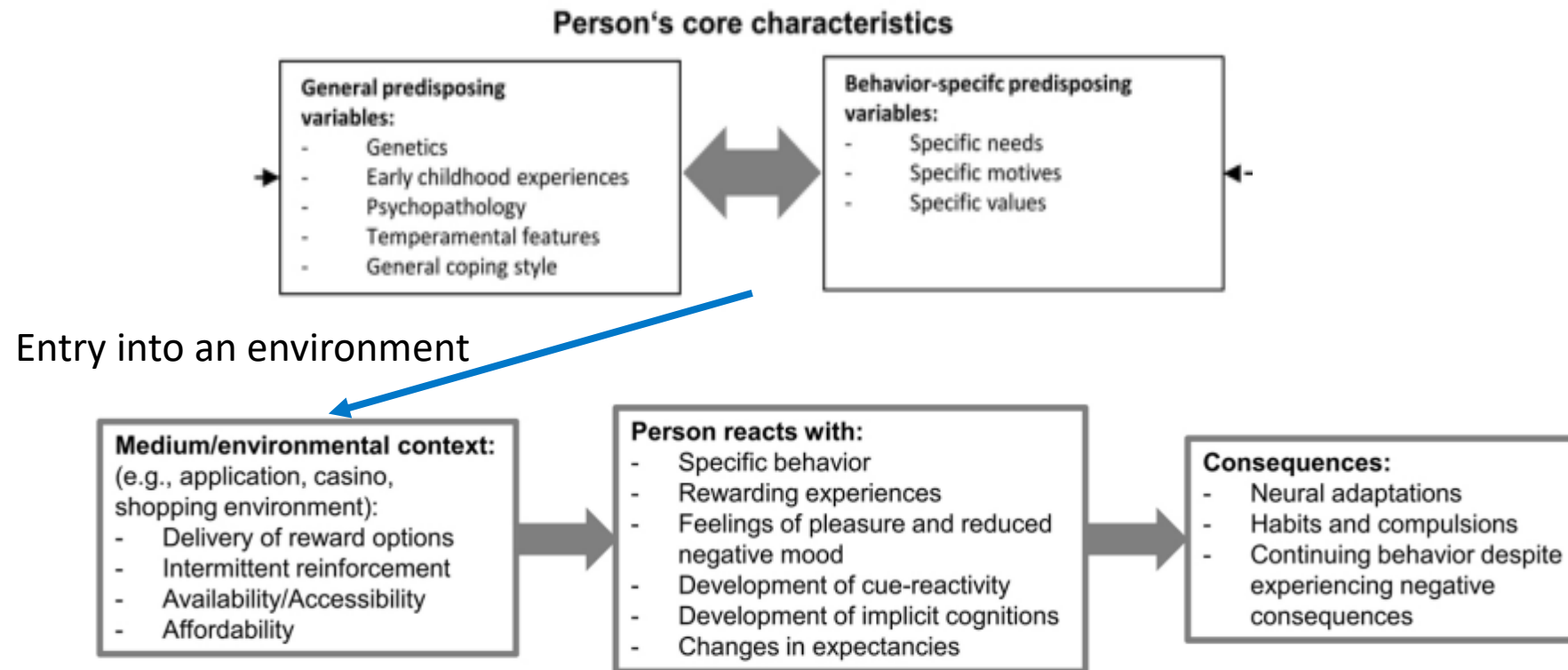
Sundaray A, Galimoutu NC. Effects of video games on individuals during COVID-19 lockdown in India. *International Journal of Indian Psychology* 2020; 8(2):188-92.

IGD—What travels with it?

- Co-existing depressive symptoms and attention disorders were more likely in those with IGD as compared to peers
- Risk related to social isolation and poor interpersonal skills exists
 - those with poor social skills and subsequent social dysfunction will worsen when they start to develop symptoms of IGD

IGD—How does it develop?

- Interaction of Person-Affect-Cognition-Execution (I-PACE) Model
 - For developing addictions, originally done for internet-related addictions, now more generalized



From Brand M, Wegmann E, Stark R, Muller A, Wolfling K, Robbins TW, Potenza MN. The interaction of person-affect-cognition-execution model for addictive behaviors: update, generalization to addictive behaviors beyond internet-use disorders, and specification of the process character of addictive behaviors. *Neuroscience and Behavioral Reviews* 2019; 104:1-10.

IGD—How does it develop?

- Maladaptive cognitions = cognitive distortions and harmful beliefs of gaming
 - Three specific types derived from a systematic review of 36 studies were associated with IGD
 - Perceived overvaluation of rewards of internet gaming (e.g., feeling better and more in control)
 - Perceived urges (eagerness) for playing internet games in real life
 - Perceived unwillingness to stop playing without completion of gaming tasks (e.g., “Just one more turn” or repeated attempt when not successful)
 - The maladaptive cognitions interact with the continual stimuli provided by devices and the internet (constant scrolling, popups, sounds) to maintain excessive Internet usage through a cycle of transforming cognitions and reinforcement

Billieux J, Potenza MN, Maurage P, Brevers D, Brand M, King DL. Cognitive factors associated with gaming disorder. In: Cognition and Addiction; Elsevier, 2020:221-30.

Yu Y, Mo KPH, Zhang J, Li J, Lau JTF. Why is internet gaming disorder more prevalent among Chinese male than female adolescents? The role of cognitive mediators. Addictive Behaviors 2020; 112:106637.

Yu Y, Mo PKH, Zhang J, Li J, Lau JTF. Maladaptive cognitions, loneliness, and social anxiety as potential moderators of the association between internet gaming time and Internet gaming disorder among adolescent internet gamers in China. Addictive Behaviors 2022; 129: 107239.

Davis RA. A cognitive-behavioral model of pathological Internet use. Computers in Human Behavior 2001; 17(2): 187-95.

Yu Y, Mo PKH, Zhang J, Li J, Lau JTF. Maladaptive cognitions, loneliness, and social anxiety as potential moderators of the association between internet gaming time and internet gaming disorder among adolescent internet gamers in China. Addictive Behaviors 2022; 129: 107239.

IGD-How does it develop?

- These maladaptive cognitions then interact with loneliness and social anxiety and seem to reduce the dosage effect needed to move from healthy internet gaming/usage to IGD
 - Loneliness (a social cognition)
 - Social anxiety (psychopathology)
 - Social Cognition + Psychopathology elevates the gratification of internet gaming, which may result in IGD

Billieux J, Potenza MN, Maurage P, Brevers D, Brand M, King DL. Cognitive factors associated with gaming disorder. In: Cognition and Addiction; Elsevier, 2020:221-30.

Yu Y, Mo KPH, Zhang J, Li J, Lau JTF. Why is internet gaming disorder more prevalent among Chinese male than female adolescents? The role of cognitive mediators. Addictive Behaviors 2020; 112:106637.

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IGD-How do I screen for it/judge its severity?

- Several research tools utilized specific to IGD
 - DSM-5 criteria checkbox (yes/no for each criteria, 5 or more = probable IGD) generally recognized as a valid way to screen for IGD (sensitivity 73.6%, specificity 100%)
 - Internet Gaming Disorder Test (IGD-20)
 - 9 item short-form Internet Gaming Disorder Scale (IGDS-SF9)
 - MOGS
 - There are multiple others, but ones above validated in American gamers

Ko CH, Yen JY, Chen SH, Wang PW, Chen CS, Yen CF. Evaluation of the Diagnostic Criteria of Internet Gaming Disorder in the DSM-5 Among Young Adults in Taiwan. *Journal of Psychiatric Research*, 2014; 53(6):103-110.

Pontes HM, Kiraly O, Demetrovics Z, Griffiths MD. The conceptualization and measurement of DSM-5 Internet Gaming Disorder: The development of the IGD-20 Test. *PLoS ONE*, 2014; 9(10): e110137.

Qin L, Cheng L, Hu M, Liu Q, Tong J, Hao W, Luo T and Liao Y. Clarification of the Cut-off Score for Nine-Item Internet Gaming Disorder Scale–Short Form (IGDS9-SF) in a Chinese Context. *Frontiers in Psychiatry*, 2020; 11:470

Pontes HM, Griffiths MD. Measuring DSM-5 Internet Gaming Disorder: Development and Validation of a Short Psychometric Scale. *Computers in Human Behavior*, 2015; 45:137-143.

IGD-20

The Internet Gaming Disorder Test (IGD-20 Test) (Pontes et al., 2014)

Instructions: These questions relate to your gaming activity during the past year (i.e., 12 months). By gaming activity we mean any gaming-related activity that was played on either a computer/laptop, gaming console and/or any other kind of device online and/or offline.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
1. I often lose sleep because of long gaming sessions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2R. I never play games in order to feel better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I have significantly increased the amount of time I play games over last year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. When I am not gaming I feel more irritable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have lost interest in other hobbies because of my gaming.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I would like to cut down my gaming time but it's difficult to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I usually think about my next gaming session when I am not playing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I play games to help me cope with any bad feelings I might have.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I need to spend increasing amounts of time engaged in playing games.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I feel sad if I am not able to play games.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I have lied to my family members because the amount of gaming I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I do not think I could stop gaming.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I think gaming has become the most time consuming activity in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I play games to forget about whatever's bothering me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I often think that a whole day is not enough to do everything I need to do in-game.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I tend to get anxious if I can't play games for any reason.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I think my gaming has jeopardized the relationship with my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. I often try to play games less but find I cannot.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19R. I know my main daily activity (i.e., occupation, education, homemaker, etc.) has not been negatively affected by my gaming.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I believe my gaming is negatively impacting on important areas of my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IGD9-SF

Internet Gaming Disorder Scale–Short-Form (IGDS9-SF) (Pontes & Griffiths, 2015)

Instructions: These questions will ask you about your gaming activity during the past year (i.e., last 12 months). By gaming activity we understand any gaming-related activity that has been played either from a computer/laptop or from a gaming console or any other kind of device (e.g., mobile phone, tablet, etc.) both online and/or offline.

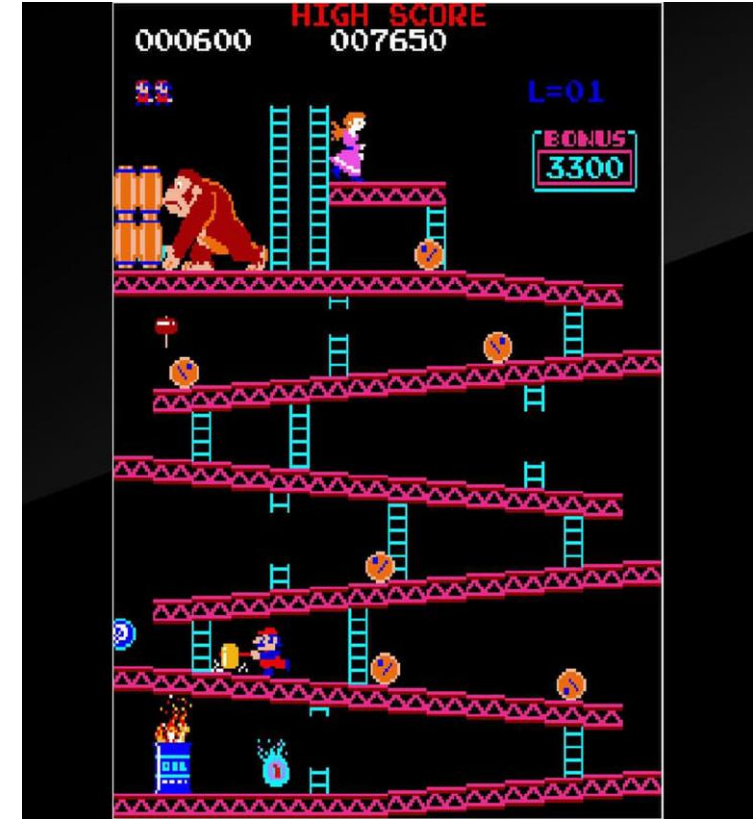
	Never	Rarely	Sometimes	Often	Very Often
1. Do you feel preoccupied with your gaming behavior? (Some examples: Do you think about previous gaming activity or anticipate the next gaming session? Do you think gaming has become the dominant activity in your daily life?)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Do you feel more irritability, anxiety or even sadness when you try to either reduce or stop your gaming activity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Do you feel the need to spend increasing amount of time engaged gaming in order to achieve satisfaction or pleasure?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Do you systematically fail when trying to control or cease your gaming activity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Have you lost interests in previous hobbies and other entertainment activities as a result of your engagement with the game?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Have you continued your gaming activity despite knowing it was causing problems between you and other people?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Have you deceived any of your family members, therapists or others because the amount of your gaming activity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Do you play in order to temporarily escape or relieve a negative mood (e.g., helplessness, guilt, anxiety)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Have you jeopardized or lost an important relationship, job or an educational or career opportunity because of your gaming activity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MOGS

1. I continue to play despite I think it would be better to stop.
2. I have no control over how much time I play.
3. Once I start online gaming, I cannot stop.
4. Online gaming makes me lose control.
5. Thoughts about online gaming interfere with my functioning.
6. Thoughts about online gaming are becoming an obsession.
7. Online gaming makes my worries more bearable.
8. Online gaming reduces my negative feelings.
9. Online gaming helps me to control my negative thoughts.
10. Online gaming stops me from worrying.
11. Online gaming reduces my anxious feelings.
12. Online gaming distracts my mind from problems.

IGD – How do I treat it (non-medication)?

- Pediatric and adolescent considerations
- CBT



King DL, Delfabbro PH, Griffiths MD, et al. Assessing clinical trials of Internet addiction treatment: a systematic review and CONSORT evaluation. *Clin Psychol Rev* 2011;31(7):1110–6.

Jorgenson AG, Hsiao RCJ, Yen CF. Internet addiction and other behavioral addictions. *Child Adolesc Psychiatr Clin N Am* 2016;25(3):509–20. 342

Jaeger S, Muller KW, Ruckes C, et al. Effects of a manualized short-term treatment of internet and computer game addiction (STICA): study protocol for a randomized controlled trial. *Trials* 2012;13(1):1.

Kim SM, Han DH, Lee YS, et al. Combined cognitive behavioral therapy and bupropion for the treatment of problematic on-line game play in adolescents with major depressive disorder. *Comput Hum Behav* 2012;28(5):1954–9. 42.

King DL, Delfabbro PH. The cognitive psychology of internet gaming disorder. *Clin Psychol Rev* 2014;34:298–308.

Young KS. CBT-IA: the first treatment model for internet addiction. *J Cogn Psychother* 2011;25:304. 44. Liu C, Liao M, Smith DC. An empirical review of internet addiction outcome studies in China. *Res Soc Work Pract* 2012;22(3):282–92.

King DL, Delfabbro PH, Griffiths MD, et al. Cognitive-behavioral approaches to outpatient treatment of internet addiction in children and adolescents. *J Clin Psychol* 2012;68(11):1185–95.

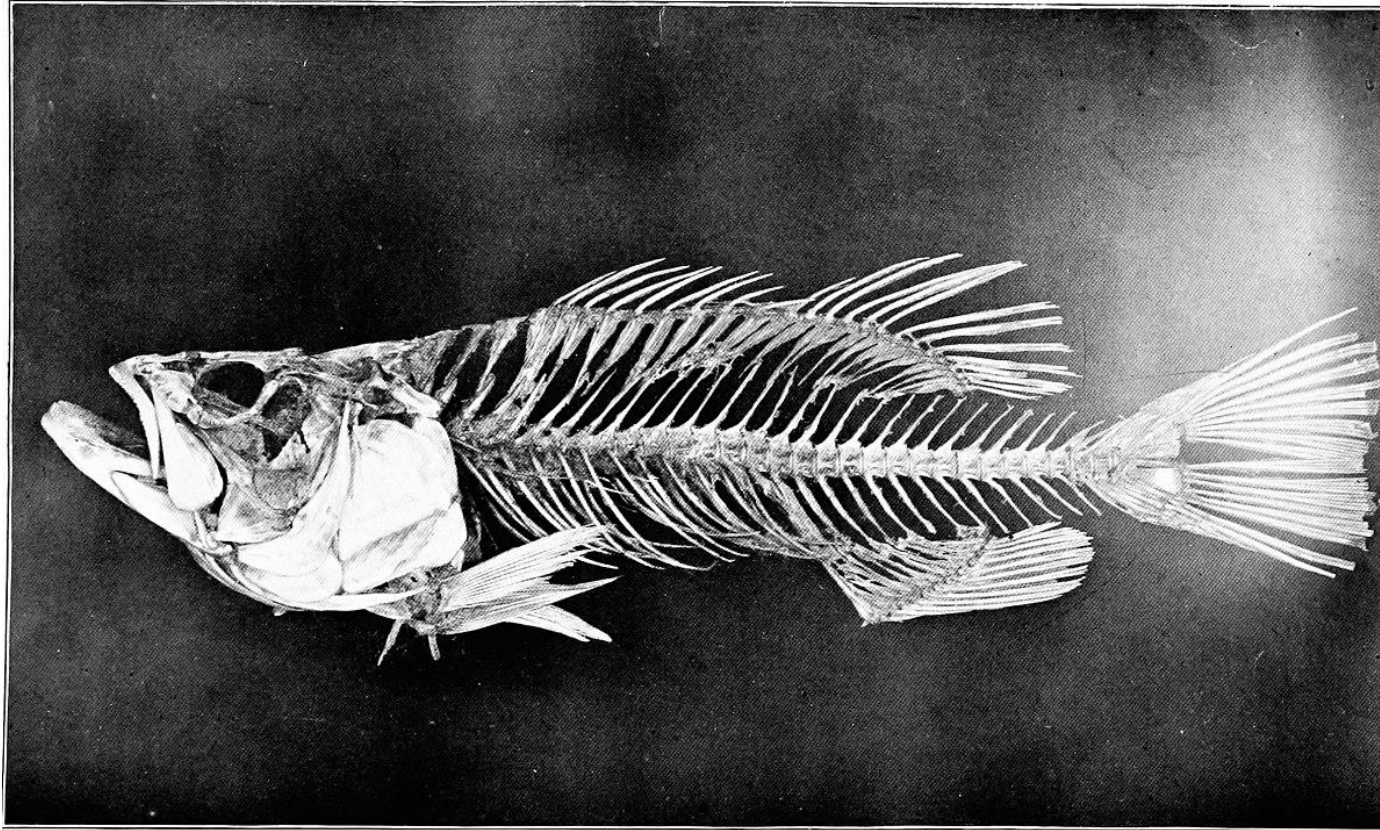
IGD – How do I treat it (medication)?

- Efficacy demonstrated to mild degree for various antidepressants, opioid receptor antagonists and partial agonists, mood stabilizers, antipsychotics, glutamatergic drugs, N-methyl-D-aspartate receptor antagonists, and psychostimulants
- Most studied is bupropion

Kim SM, Han DH, Lee YS, et al. Combined cognitive behavioral therapy and bupropion for the treatment of problematic on-line game play in adolescents with major depressive disorder. *Comput Hum Behav* 2012;28(5):1954–9.

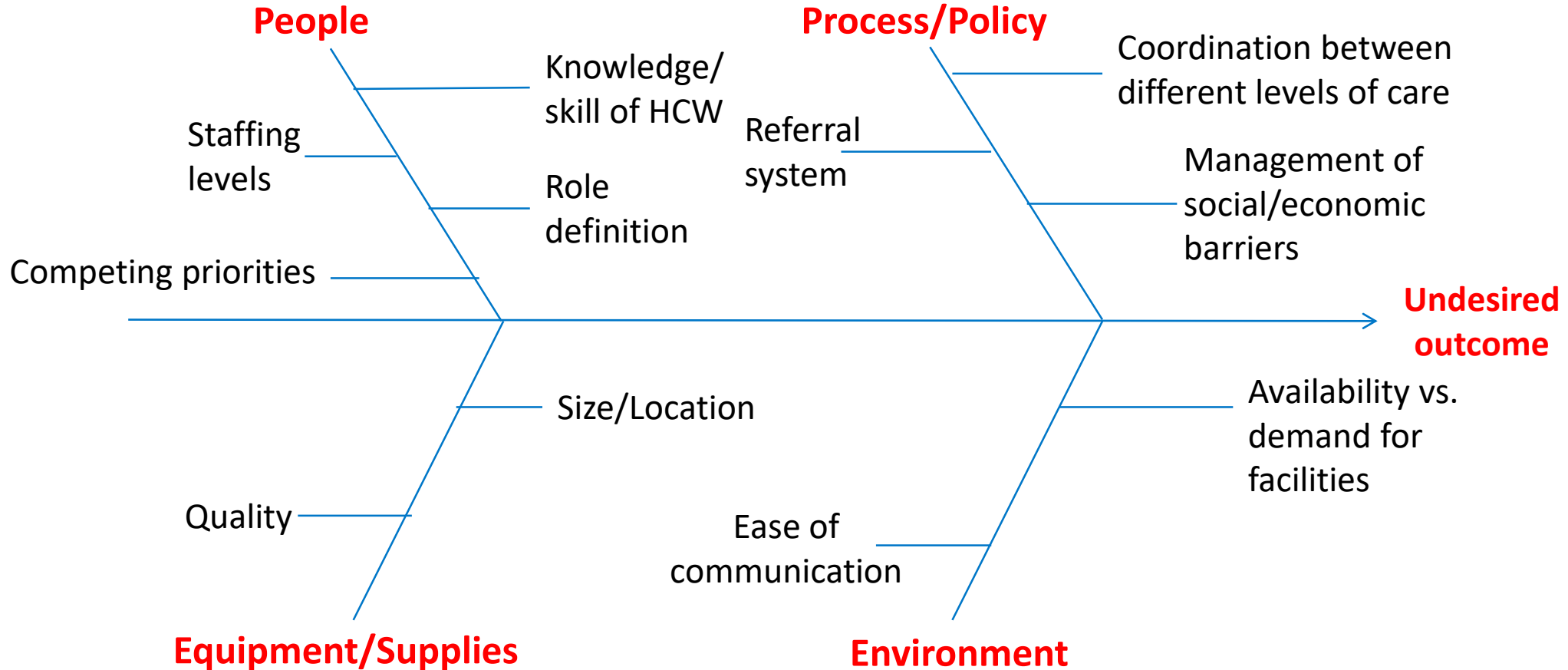
Han DH, Renshaw PF. Bupropion in the treatment of problematic online game play in patients with major depressive disorder. *J Psychopharmacol* 2012; 26(5):689–96.

Han, D. H., Hwang, J. W., & Renshaw, P. F. 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*, 2010; 18(4), 297–304.



Fishbone Analysis: Adverse Event = Delay in Diagnosis

Fishbone: A Reminder



What contributed to the unfavorable outcome?

- People Factors:
 - Recognition of psychiatric disease vs. boredom/tail end of bell curve of normal behavior
 - Was treatment chosen appropriate
- Process and Policy:
 - Referral System/Coordination Between Different Levels of Care
 - Early days of COVID – access to video visits, behavioral health resources for those unwilling to leave their home limited
 - Management of Social and Economic Barriers:
 - Patient stigmatizes psychiatric disease
 - Patient refuses COVID vaccination, which prevents return to in-person workplace

Panelist Q & A



Questions

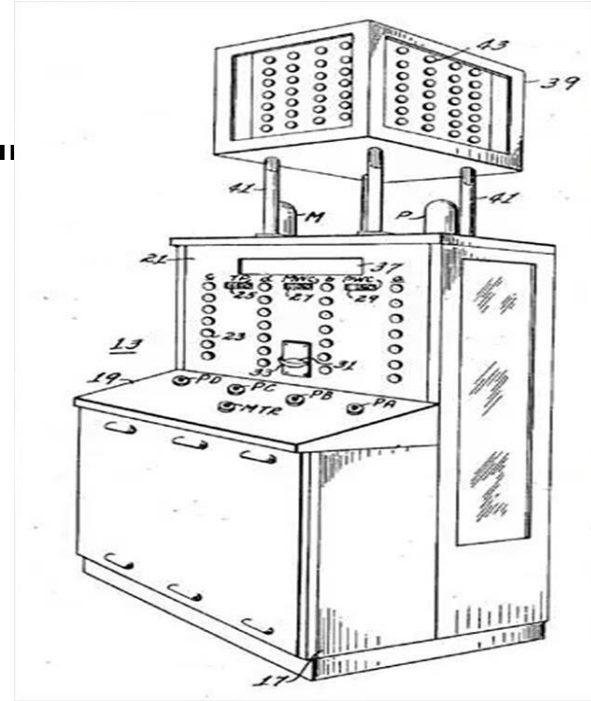
- Given that e-gaming is now considered a sport, where does the line get drawn between playing the sport of your choice to master your skills and identifying potentially problematic behavior? For example, if someone were to say that they are a varsity baseball player and they spend 3 hours per day at team practice, 2 hours per day in small group/1:1 fielding and hitting practice, and 1 hour per day watching video of opposing pitchers, this would not raise eyebrows (probably).
- Which screening tool do you recommend for IGD?
- Given the omnipresence of the internet, how do you maintain remission in your patients?



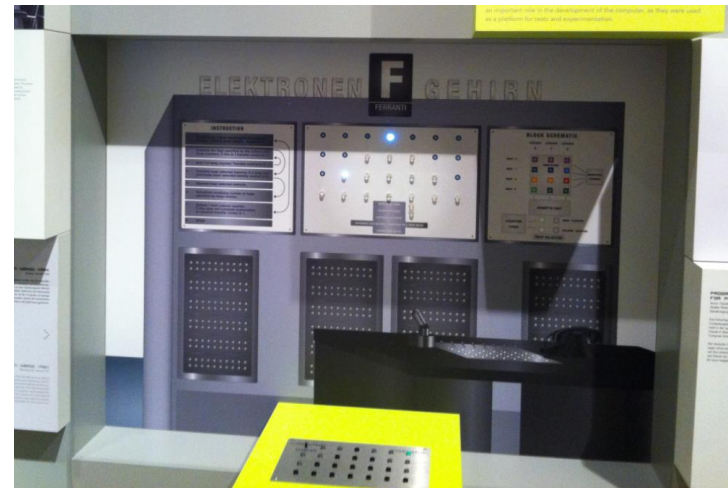
Historical Unknown Revealed: Credit given for the name of game or name of the machine

It's not a person, but a thing...

- 1940: New York World's Fair, Westinghouse displayed a machine, the **Nimatron** that played the game against a human, considered the first-ever electronic computerized game
- 1951: The world's first computer game, an evolution of the Nimatron called NIMROD, is released
- The game is called **Nim**



The Nimatron in 1940



NIMROD, on display at Computerspielmuseum in Berlin

Any questions?

