International Archives of
Addiction Research and Medicine

Cyberaddictions and Gambling Addiction: A Reflection on Social Markers and Paths of Intervention

Amnon Jacob Suissa*

School of Social Work, University of Quebec in Montreal, Canada

*Corresponding author: *Amnon Jacob Suissa, School of Social Work, University of Quebec in Montreal, Canada, E-mail: Suissa.amnon@uqam.ca*

Abstract

The concept of cyberaddiction is far from being unanimously accepted by scientists. The same is true of addiction to videogames or to Facebook. While certain researchers wished to see this condition included in the DSM-5, others question the operational and practical basis for the diagnostic criteria. Some see cyberaddiction as a problem linked more to time management, to brain deficits, to an impulse-control disorder or to psychosocial conditions while others consider it to be a pre-existing comorbidity.

To the extent that most gambling addiction problems are generally understood as individual and pathological problems rather than the result of psychosocial conditions (poverty, unemployment, weak social ties, social exclusion, hyper individualism, etc), the aim of this article is to reflect and analyze the emerging trend in cyberaddictions on focusing on psychosocial aspects of the addiction phenomenon. After a review of scientific literature, we will attempt to define what a cyberaddiction is. Considering the infinite literature on this contemporary subject, we will limit our analysis more on social determinants like individualism and social ties. Finally, we will reflect on paths for intervention and prevention.

Keywords

Cyberaddiction, Gambling, Hyperindividualism, Social ties, Psychosocial perspective, Intervention

Bibliographical Notes on the Author

Amnon Jacob Suissa is a professor with the school of social work at Université du Québec à Montréal. He teaches courses on addictions as a social problem and the methodology of social intervention. With a constructivist approach to social problems, he is interested in the social determinants of addictions and their impact on intervention processes. He has a background in family therapy and sociology and is the author of several books and one hundred scientific articles on the phenomenon of medicalization of behaviors understood as pathologies or even diseases. These include Le monde des AA: The world of AA with PUQ, Quebec University Press (2009), Pourquoi l'alcoolisme n'est pas une maladie Why Alcoholism is not a disease (2007) and Le jeu compulsif: vérités et mensonges Pathological Gambling: trues and lies (2005) with Éditions Fidès. Dr Suissa is often invited in Canada and abroad for scientific interventions, conferences, trainings and research collaborations.

Introduction

The globalization of Internet and online gambling created an unprecedented pool of opportunities for private and public sectors in the economic and social world today. Global gambling sector was worth over $450 billion in 2014 and is predicted to reach $525 billion in 2019 [1,2]. Consequently, we are witnessing fierce competition worldwide dictated by a pro-gaming discourse in which the geopolitical and economic Realpolitik has increasingly become the established norm. According to Pierceall [3] Nevada is on the cusp of what could be a casino revolution, drawing up plans for an arcade-style video game that would pay out winnings based on a gambler's skill. Aimed to attract younger people, game developers trust that these innovations will stop the decrease of gambling revenues from traditional slot machines and video lottery terminals [3]. Looking at increasing the skill factor in gambling allowing players to compete against each other rather than passively playing only against the house, some predict that the slot floors of today will disappear 10 years from now [2]. In the same logic, and while Online Gambling is still around 8.9% of the global industry by revenue, the combination of mobile gambling, micropayments and smart phone penetration is predicting to cause a huge expansion in mobile gambling through 2017 [4].

In the United States, a potential to generate tens of billions of dollars in tax revenue while bringing hundred thousand new jobs is a goal considered possible in the near future. Furthermore, estimates show that 100 million individuals will gamble on their mobile devices by 2018 [5]. Today, anyone who has an Internet connection and wants to gamble is able to do so.

According to Hellman, Schoenmakers, Nordstrom & Van Holst [6] Pezoa-Jares, Espinoza-Luna & Vasquez-Medina [7] if an increasing number of non problematic activities can be performed on the Internet: others can also create a field more propitious to abuse and potential addictions [6,7]. In fact, a number of research studies addressing the addictive potential of the Internet has steadily increased. This said, the question surrounding whether addiction to the Internet is a unique problem per se or has all the ingredient to what constitutes an addiction continues to nourish the debate [8,9,10,11].

As an example, although pathological gambling has been an official diagnosis since 1980 in the diagnostic and statistical manual of

mental disorders (DSM), the transition of gaming to the cyberworld has revealed a strong social trend. In 2006, the American Gaming Association estimated that there were between 14 and 23 million online players worldwide [12]. In 2012, 1% of the U.S. economy was based on gambling, which accounted for 820,000 jobs, 566 casinos, and overall direct and indirect expenditures totaling $125 billion (AFP, 2012). About pathological gambling.

In Quebec, the proportion of high school students who gambled online doubled, reaching 5%. This problem is likely to increase, especially among online gamers [13]. This is due to certain intrinsic modalities favored by online game: convenience of electronic payments, gaming on credit, speed, anonymity, interactivity, the immersive experience. Because of the strong causal link between accessibility and gambling problems, the public health perspective makes it seem unrealistic to assume that government control is an effective strategy for containing the risks associated with online gambling.

Although there is an ongoing debate between different researchers [14,10,15,13] regarding the scientific validation of certain figures, several studies have shown that the prevalence of online gaming is three to four times higher than that of other kinds of gambling [16,17]. According to Griffiths, Internet gamblers have more gaming-related problems than other types of gamblers, are more likely to drink and smoke, are most often male, usually young adults, unmarried, highly educated, and employed in management or administration positions [16]. Among other recommendations, Griffiths concludes that private and public sector gambling industries must acknowledge the need to provide online infrastructures to ensure greater social responsibility and reduce risky behaviors.

Some of the most interesting research on Internet addiction has been published in South Korea. In this country, the gaming market is worth 9.16 billion and the gaming industries are opposed to any law that brands their product as addictive or seeks to control how to sell it [18]. Considered to be the "most popular drug" in this country, online gaming constitutes enough of a serious problem that the government subsidizes treatment programs for game addiction. After a series of 10 cardiopulmonary-related deaths in Internet cafés and a game-related murder, South Korea considers Internet addiction one of its most serious public health issues. Using data from 2006, the South Korean government estimates that approximately 210,000 South Korean children (2.1%; ages 6-19) are afflicted and require treatment. About 80% of those needing treatment may need psychotropic medications, and perhaps 20% to 24% require hospitalization [19,20]. These researchers underline the facts that since the average South Korean high school student spends about 23 hours each week gaming another 1.2 million are believed to be at risk for addiction and to require basic counseling. In particular, therapists worry about the increasing number of individuals dropping out from school or work to spend time on computers. Already in 2007, South Korea has trained 1,043 counselors in the treatment of Internet addiction and enlisted over 190 hospitals and treatment centers. Preventive measures are now being introduced into schools. In the Asian continent, the prevalence impact of cyberaddiction is ranging from 8.1% to 10.7% and is more severe than in the United States (1 to 4%) or Europe (1%) [21,22].

The higher prevalence among Asian people can be explained mainly by cultural factors. According to anthropologist Elisabeth Papineau who lived and studied these issues in China, the greater propensity to pathological gaming in Chinese communities is explained by the external locus of control integrated into Chinese culture and values [23]. In other words, Chinese people generally believe that the rewards and events of their lives are dependent on external forces. In the area of gambling, for example, fate or socioeconomic condition can be modified by turning to chance to overcome the present conditions that one urgently wishes to change.

In a study investigating the validity of profiles in young people in Turkey [24], frequent and prolonged Internet use confirmed the strong trend inasmuch as it was directly associated with psychological and social problems. According to these researchers, young people who are not psychologically mature and who attempt to adapt to an environment characterized by very high speed and performance at any price are also more at risk of developing a cyberaddiction. Some youths seek emotional and social support online, whereas others, on the contrary, go online to escape from major personal, affective, family, or financial problems. Finally, a lower level of social support from family and friends or weak social ties among young people contributes to the increase and incidence of cyberaddiction. That leads to the question: Does the condition referred to as dependence on or addiction to the Internet—that is, cyberaddiction—really exist? Considering this heavy trend, we can conclude that there is a rapid increase of potential for cyberaddictions around the world.

Cyberaddiction: A Definition Attempt

Since it is not listed in international disease classification manuals cyberaddiction is not as of yet considered to be a mental illness in the strict sense of the word. In this context, Griffiths, King & Demetrovics [25] suggest to have a unified approach to assessment for Internet gaming disorder [25]. Although the concept of Internet addiction came up with an idea proposed by Ivan Goldberg on a chat forum in 1995 used [26]; many Internet users recognized themselves in his description. One year later, in 1996, psychologist Kimberley Young suggested considering addiction to the Internet as an actual new clinical pathology and created a 20 question test which measures how seriously the web affects a person's social life [27].

It is important to note that the criteria Young suggested were based on those used to diagnose pathological gambling in the DSM-IV [27]. Later, Beard & Wolf [28] forged ahead by suggesting that the diagnostic criteria for cyberaddiction be modified [28]. Since then, the growing body of literature has addressed the criteria specific to this condition, in order to better identify the issues related to different varieties of cyberaddiction, such as addiction to video games [29-32], Facebook [33,34], or various online games. As the field evolved, researchers now probe for signs of moodiness, depression and social withdrawal stemming from unrestrained internet use; constant desires to plug-in; and unsuccessful attempts to curb usage.

As an example, we can think of the smartphone addiction potential [35] and what she calls nomophobia. This addiction psychiatrist expert underlines that this condition is an anxiety disorder that occurs often when individuals develop and addictive pattern after they separate themselves from their mobile devices via fear of missing exchanges (FO), chats, facebook status change. If cyberaddiction do not exist as it is with sexual addiction in the DSM-5, behavioral addictions do exist and the addiction hypothesis is more than possible [36].

With the newest DSM-5 version published in 2013, there are as yet no agreed-upon indicators showing that this condition really is an official psychiatric category. Should we consider this kind of disorder to be a behavioral or psychiatric addiction in its own right? If so, how and where should it be classified as a psychiatric category? [37,29] Does the virtual space mean the relationship with reality needs to be rethought?

The concept of cyberaddiction is by no means unanimously accepted by scientists and social stakeholders [35,38-41]. Already in 2008, Block did question in depth the issues related to Internet addiction as a pathology that merits inclusion in DSM-5 [42]. That being said, it is important to distinguish between online games that require an Internet connection and video games or so called offline games that do not require Internet use [43]. Along these lines, Davis, Flett & Besser [44] suggested that there are essentially two disorders: specific pathological Internet use (SPIU), which would probably exist even in the absence of the Internet, and generalized pathological Internet use (GPIU), which is related to the Internet as such (e.g., e-mail, chat) [44].

Although omnipresent today the Internet is has become all but indispensable in our social and economic relationships; misuse can trigger problematic behaviors. A study of students in two U.S. colleges

and their relationships with ICTs (information and communication technologies) revealed that frequency of use has increased significantly [45]. According to this study, 67% of young adults between the ages of 18 and 24 had a smart phone; they sent an average of 109 text messages per day, for a monthly average of 3,200. The average time spent in these activities was 7 hours per student per day, and 60% of the subjects said that they probably had a cyberaddiction.

Although cyberaddiction is not yet included in the classification of mental illnesses, it is undeniably true that enthusiasm for online activities has reached unprecedented levels, which may occasionally be reflected in abusive and problematic patterns of use. In his work, Block (2008: 306), suggested to include a version of Internet addiction to the DSM-5 by referring mostly to four major markers for a diagnosis which were followed by Beard & Wolf [28] and Weinstein & Lejoyeux [46] in their clinical research [28,42,46].

1- Excessive use of Internet: associated to the loss of the notion of time to the detriment of other sources of activities and sources of satisfaction

2- Retreat: when the Internet is not accessible, the user feels anger, tension and/or depression

3- Growing tolerance: as addictions to psychotropic substances, the more you use Internet the more you develop the tolerance and the need to raise the time invested

4- Undesirable consequences: from social isolation to lies, lower academic results and fatigue.

In short, and regarding the complexity for a clear definition of cyberaddiction, it is suggested that it be used to denote a condition for which the criteria are still directly inspired by those used to define pathological gambling or addictions to psychoactive substances (e.g., alcohol, heroin, cocaine, cannabis). Some authors talk about cyberaddiction, which can slip from passion into obsession very rapidly [47], while others suggest that the end result of these new technologies may be the reinvention of humanity [48]. In 2013, the psychiatrist responsible of the research committee for addictions in the DSM-5, Charles O'Brien, insisted to consider more Internet gaming disorder instead of Internet use disorder [10,49]. Bearing these nuances and qualifications in mind, some attempts at a definition inspired by these remarks and observations are presented below.

1. Cyberaddiction is the excessive use of the means of communication offered by the Internet. An individual with this addiction has lost control and constantly seeks connection with the Internet, with the result that his/her social and personal life are organized around it.

2. Cyberaddiction is a psychological and social disorder resulting in a loss of control and an irresistible, obsessive need to use the Internet.

Weaker social ties and individualism as determinants for Cyberaddictions

In our society's growing individualism, some will call it hyper individualism, several studies as shown by Hofmann and his colleagues regarding the daily temptations, desires, and conflicts inherent in self-control have resulted in the hypothesis that people act in this way to fill the emptiness of real-life social ties [50-54]. Ideologically, the addiction phenomenon is often linked and explained more with individual failings than contextual and social causes. In fact, individualism does not pertain to the individual per se, it is *a collective ideology* that tends to influence social forces for individualistic desirability in the public sphere [8]. Freedom of choice, for example, is a value that is important to our democracies, but it is nonetheless true that it is an abstract concept given that choices are influenced primarily by social forces. While the issue of *social ties* is, and remains, central, since it spearheads the modes of control and measures to be favored [55,56].

Today, we can say that there is a social trend in which individualism holds way, to the detriment of social networks and connections, which become increasingly weak. As a consequence of this increasing individualism, cyberaddiction conceals the very real psychosocial suffering of users who are dependent on the Internet and raises important ethical, social and political questions.

From this perspective, the work of Gilles Lipovetsky on the process of individualism and what he calls the age of emptiness and excess in our so-called democratic societies is relevant [57,58]. He emphasizes that the social background of individualism is at the heart of the upsurge in addictions. Today, Lipovetsky denounces the emptiness of social ties whereby the ideology of the now and the new has become a central reference point in managing society. This concept of society as seen through individualism is an important determinant in the pursuit of individual happiness and well-being while more community-focused projects are set aside. If new technologies offer a multitude of communication tools, the result is that the more individuals communicate, the more alone they seem to be. In other words, although people with Internet access are "connected," they have no social ties in the sense of spending time accommodating other people and adapting to someone else's rhythms to keep the relationship harmonious [59].

If psychological and personal factors enable us to better understand the dynamic relationship that generates the addiction cycle, it is important to put forward the multifactorial reality of this phenomenon by trying to include the social conditions and determinants which shape and structure, to a large extent, the addiction per se. As an example, the person who develops excessive use of Internet does it at the expense of real social ties and therefore becomes more and more socially isolated. Said differently, the more you abuse of your time on the Internet the lonelier you are. Hyper individualism constitutes a concrete social condition which generates more propitious conditions for addictions. At the heart of the dynamic involving the individual and his/her relationship to cyber activities, psychosocial conditions and strong or weak social ties seem to be a central factor in understanding the construction of this phenomenon [9]. From this perspective, we can ask to what extent social conditions and addiction behaviors constitute a potential individual pathology?

To sum up, although we are all candidates for different addictions, there is no doubt that when the primary motivation is pleasure, the likelihood of developing a problem is very low or even nonexistent. On the other hand, when the primary motivation is to escape from difficulties related to work stress, loneliness, boredom, low self-esteem, or identity or mental health problems, the chances of triggering an addiction are higher. Another positive marker complementing our understanding of the cycle, is when a person has many sources of interest and satisfaction in his/her lifestyle. An individual equipped with these assets is less likely to become dependent because he/she can tap into a variety of personal and social resources that constitute protective factors.

Insofar as environment in the public arena encourages certain norms and behaviors as being socially desirable and discourages others, one can better understand the centrality of environment in determining what is acceptable and what is not [8,9]. In his book *Gambling, Freedom and Democracy,* Peter Adams [60] clearly shows how advertising and marketing strategies succeed in normalizing and influencing public's beliefs of increasing social desirability [60]. In other words, the social reaction to our behaviors and actions in the environment is a crucial factor.

As for the question of whether cyberactivities may have a more positive influence, many authors mention several indicators to be considered [26,41,61,62]. We can think of community engagement, volunteering, mutual assistance groups, demonstrations, exchanges of artistic content and ideas with blogs, videos, recreational online games, exposition to wider horizons and networks, cultures and countries, teaching tools that can be beneficial for the development of writing skills and creativity. Based on the uses and gratification theory [51,63], management of moods and enhancing emotional states are also seen as top reasons why people use diverse forms of

media [64]. In terms of health, a video game was created by Ubisoft in Canada to treat an eye condition called Amblyopia [65]. In short, the video game permits the use of both eyes instead of only one by adding the interactive colors blue and red. The patient is trained and gradually the brain understands that both eyes are important. After two months, the patient recovers the use of his vision and is cured. https://www.youtube.com/watch?v=2Nx-gIFNXtY&feature=youtu.be

Conclusion and Outlook

Today, we are witnessing a fierce challenge between governments and the "Silicon Valley prophets" in terms of state's sovereignty [66]. As an example, we can think of Apple who surpasses the state of Switzerland in terms of capitalization and shares. These facts should make us more alert about social and political issues since companies like Google, Uber, Yahoo and Facebook could become, to a certain extent, the real deciders for the future of our societies.

The use of information technologies and social networks has completely changed social relationships and the process of socialization. This multitasking approach to social reality and communications has a number of positive aspects but also some potentially harmful ones [8,67]. The increase in the number of online gaming spaces around the world and their legalization by governments and private gaming industries constitute propitious conditions for the development of cyberaddictions. This social reality, based on an ideology of competition, hurried society and performance at any cost, is generally reflected in a feeling of exclusion for an increasingly large proportion of the population. Understood in this way, cyberaddictions are not mere myths but a true empirical reality [68]. The same is true of video game addiction, for example, which is undeniably anchored in reality, as the increasing number of hospitalizations of young people is confirmed [69,70]. Some Canadian experts and therapists propose also Internet-based interventions for gamblers who develop addictions [71].

Despite these obvious risk factors, Lupton [51] and Nadeau [39] encourages us at this stage to remain alert and question the scientific validity of cyberaddiction as a "real addiction" that is officially recognized [39,51]. Must we then wait for the number of cyberdependents to increase before we consider this condition as a true addiction?

This question raises the issue of the power to define a condition, which is far from being neutral inasmuch as it sets the tone for social understanding and the preferred treatments [9,50]. By extension, it raises the issue between approaches that favor a neurochemical, biological, medical, or genetic version of the brain—in short, the medical model of disease focusing on permanent pathology (brain based-disease approach)—and the alternative paradigm proposed by the various psychosocially inspired models. In the dominant medical discourse, a subject who has developed an addiction is understood as a person who is primarily experiencing psychological and personal problems—a neuronal deficiency or mental pathology; thus, he/she is a victim of a loss of control and has an addiction disease. When the focus is on social pathology, in the sense of Parsons (1966), people are informed that they alone are responsible for their own condition and actions and their behaviors are understood as deviant or abnormal [72]. Instead of including the psychosocial determinants, the medical model privileges *symptomatology instead of etiology*. A psychosocial perspective can teach us more about the complexity of the addiction phenomenon by shedding light on the individual and personal components and the social ones as well [8].

Although cyberaddiction is a way of escaping from reality, the virtual behavior often stems from more profound suffering and is directly related to feelings (low self-esteem, anger, sadness, etc.). It is important to act proactively and preventively by giving young people and especially their parent's objective, non-moralistic information about the potential harmful consequences associated with video games and Facebook (depression, romantic breakups, family problems, cyberbullying, etc). As with gambling, inspiration can be found in the encouraging results obtained by the Agence de la santé et des services sociaux de Montréal (Montreal health and social services agency), which in 2012 published an activity guide called *Bien joué* (well played) on awareness and risk prevention for adolescents; it also created the first preventive website for Quebec youths, www.lesdessousdujeu.com. Such programs could also discuss the symptoms of "cyberwithdrawal," which would enable parents and other family members and friends to better understand this addiction and act as soon as the first signs of isolation or behavioral changes appear in their children [73].

Despite the growth in knowledge regarding cyberaddictions, the study of this phenomenon is still in its beginnings. As technology continue to grow at its current speed, mental health professionals should be aware of the spectrum of Internet Addiction (IA), and work towards implementation of preventive, diagnostic and treatment strategies [7]. Can we speak more about a healthy usage of Internet and games ?

Today, we should question the results of the pathology/disease approach to the phenomenon of addictions. Like many other researchers, authors and practitioners, I share the following hypothesis: the more we label people as having or suffering from pathologies, the more we multiply their number; it is true with alcoholism and other addictions, it is true with behavioral addictions [74]. Finally, and although addiction can be understood as an individual choice, being dependent also means no longer being able to exercise free choice, given that the person has become cut off from his/her sources of interest and pleasure in favor of a cycle of vulnerability to addictions [75]. This loss of freedom is also part of this social problem and vice versa [72]. In his last book Allen Frances a psychiatrist who directed the team for the DSM-IV, underlines the fact that psychiatry today is itself out of control [76]. Could we not explore more of the social conditions that gave birth to these problems and symptoms and include them in our intervention process?

References

1. Graham L (2015) Global gambling sector worth over $450 billion.

2. Barker J (2015) Goodbye, slots: Casinos look to new types of machines to hook younger players. The Baltimore Sun.

3. Pierceall K (2015) Game-Changer: with slots losing their appeal, Vegas moves toward video games that pay out. Associated Press.

4. Ide M (2014) Mobile gambling revenues to grow at 36% CAGR.

5. Freeman G (2014) Regulate, don't ban, online gambling.

6. Hellman M, Schoenmakers TM, Nordstrom BR, Van Holst, RJ (2013) Is there such a thing as online video game addiction? A cross-disciplinary review. Addiction Resarch & Theory 21: 102-112.

7. Pezoa-Jares RE, Espinoza-Luna IL, Vasquez-Medina JA (2012) Internet Addiction: A Review. J Addict Res Ther 6: 004.

8. Suissa JA (2014) Cyberaddictions: toward a psychosocial perspective. Addict Behav 39: 1914-1918.

9. Suissa JA (2013) Addictions and medicalization of social conditions: context and paths of reflexion. J Addict Behav Ther Rehabil 2: 1-7.

10. Petry NM, O'Brien CP (2013) Internet gaming disorder and the DSM-5. Addiction 108: 1186-1187.

11. Cash H, Rae CD, Steel AH, Winkler A (2012) Internet Addiction: A Brief Summary of Research and Practice. Curr Psychiatry Rev 8: 292-298.

12. Wood RT, Williams R (2007) Internet Gambling: Past, Present and Future. In: Gary Smith, David Hodgins, Robert Williams (eds). Research and Measurement issues in Gambling Studies. Elsevier Publishing, California, USA 491-514.

13. Papineau, E, Leblond J (2010) Étatisation des jeux d'argent sur Internet au Québec: Une analyse de santé publique. INSPQ. Québec.

14. Petry NM, Rehbein F, Gentile DA, Lemmens JS, Rumpf HJ, et al. (2014) An international consensus for assessing internet gaming disorder using the new DSM-5 approach. Addiction 109: 1399-1406.

15. Kairouz S, Nadeau L (2010) Enquête enjeu-Québec. Portrait du jeu au Québec: Prévalence, incidence et trajectoires sur quatre ans. Rapport de recherche FRSQ et Université de Montréal.

16. http://jeuenligne.ca/

17. Griffiths MD (2002) The social impact of Internet Gambling. Social Science Computer Review 20: 312-320.

18. Groom N (2013) Online gaming is South Korea's most popular drug. Vice Beta.

19. Koh YS (2007) Development and application of K-Scale as diagnostic scale for Korean Internet addiction, International Symposium on the Counseling and Treatment of Youth Internet Addiction. Korea.

20. Choi YH (2007) Advancement of IT and seriousness of youth Internet addiction, International Symposium on the Counseling and Treatment of Youth Internet Addiction. Korea,

21. Cao H, Sun Y, Wan Y, Hao J, Tao F (2011) Problematic Internet use in Chinese adolescents and its relation to psychosomatic symptoms and life satisfaction. BMC Public Health 11: 802.

22. Park SK, Kim JY, Cho CB (2008) Prevalence of Internet addiction and correlations with family factors among South Korean adolescents. Adolescence 43: 895-909.

23. Papineau E (2013) The expansion of electronic gambling machines in China through anthropological and public health lenses. Asian Journal of Gambling Issues and Public Health 3: 3.

24. Günüc S, Kayri M (2010) The profile of Internet dependency in Turkey and development of internet addiction scale: Study of validity and reliability. Hacettepe university of Internet addiction 39: 220-232.

25. Griffiths MD, King LD, Demetrovics (2014) DSM-5 Internet gaming disorder needs a unified approach. Neuropsychiatry 4: 1-4.

26. Tisseron, S (2011) Les cyberaddictions. Dans Addictologie clinique, sous la direction de Eric-Pierre Toubiana. Presses Universitaires de France, 524-562.

27. Young, K (1996) Internet addiction: the emergence of a new clinical disorder. American Psychological Association, Toronto.

28. Beard KW, Wolf EM (2001) Modification in the proposed diagnostic criteria for Internet addiction. Cyberpsychol Behav 4: 377-383.

29. Pascutini F, Lançon C, Gavaudan A (2012) Addiction aux jeux vidéo et comorbidité psychiatrique. In: Dans Venisse, JL et Bronnec (eds) Les addictions sans drogue: prévenir et traiter. Elsevier Masson, 133-141.

30. Rossé E (2012) Les joueurs problématiques de jeux vidéo: éléments cliniques. In: Dans Venisse JL et Bronnec, M G (eds) Les addictions sans drogue: prévenir et traiter. Elsevier Masson 127-132.

31. Coulombe M (2010) Le monde sans fin des jeux vidéo. Presses Universitaires de France. La nature humaine.

32. Valleur M, Matysiak JC (2004) Les nouvelles formes d'addiction: l'amour, le sexe, les jeux video, Paris.

33. Andreassen CS, Torsheim T, Brunborg GS, Pallesen S (2012) Development of a Facebook Addiction Scale. Psychol Rep 110: 501-517.

34. Levard O, Soulas, D (2010) Facebook: mes amis, mes amours... des emmerdes!. Michalon Éditions.

35. Karila L (2015) Oui, il existe une addiction au smartphone mais il est possible de décrocher.

36. Rosenberg KP, Feder LC (2014) Behavioral addictions: Criteria, evidence and treatment.

37. Billieux J, Maurage P, Lopez-Fernandez O, Kuss DJ, Griffiths (2015) Can disordered mobile phone use be considered a behavioral addiction? An update on current evidence and a comprehensive model for future research. Current Addiction Reports 2: 156-162.

38. Venisse J-L, Bronnec M-G (2012) Les addictions sans drogue: prévenir et traiter.

39. Nadeau L (2012) La cyberdépendance: et s'il fallait faire des Descartes de nous-mêmes? Psychotropes. Revue internationale des toxicomanies et des addictions. France, 18: 11-24.

40. Nadeau L, Didier Acier, Laurence Kern, Carole-Line Nadeau (2011). La cyberdépendance: état des connaissances, manifestations et pistes d'intervention. Centre Dollard- Cormier. Montréal, Canada.

41. Perraton C, Fusaro M, Bonenfant M (2011) Socialisation et communication dans les jeux video. Les Presses de l'Université de Montréal, Canada.

42. Block JJ (2008) Issues for DSM-V: internet addiction. Am J Psychiatry 165: 306-307.

43. Vaugeois P (2006) La cyberdépendance: fondements et perspectives. Centre québécois de lutte aux dépendances.

44. Davis RA, Flett GL, Besser A (2002) Validation of a new scale for measuring problematic internet use: implications for pre-employment screening. Cyberpsychol Behav 5: 331-345.

45. Roberts JA, Pirog SF 3rd (2013) A preliminary investigation of materialism and impulsiveness as predictors of technological addictions among young adults. J Behav Addict 2: 56-62.

46. Weinstein A, Lejoyeux M (2010) Internet addiction or excessive internet use. Am J Drug Alcohol Abuse 36: 277-283.

47. Côté É (2010) Cyberdépendance: de la passion à l'obsession. La Presse.

48. Besnier JM (2012) Les nouvelles technologies vont-elles réinventer l'homme? Études 414: 763-772.

49. O'Brien C (2010) Commentary on Tao & al: Internet addiction and DSM-5. Addiction 105: 565.

50. Lewis M (2014) The biology of desire. Penguin Random House.

51. Lupton D (2013) Risk and emotion: towards an alternative theoretical perspective. Health, Risk & Society 15: 634-647.

52. Hofmann W, Baumeister RF, Förster G, Vohs KD (2012) Everyday temptations: an experience sampling study of desire, conflict, and self-control. J Pers Soc Psychol 102: 1318-1335.

53. Hofmann W, Vohs KD, Baumeister RF (2012) What people desire, feel conflicted about, and try to resist in everyday life. Psychol Sci 23: 582-588.

54. Hofmann W, Schmeichel BJ, Baddeley AD (2012) Executive functions and self-regulation. Trends Cogn Sci 16: 174-180.

55. Horwitz A (2002) Creating mental illness. University of Chicago Press, Chicago.

56. Horwitz A (1990) The logic of social control. Plenum Press, New York.

57. Lipovetsky G (1989) L'ère du vide: Essais sur l'individualisme contemporain. Gallimard.

58. Lipovetsky G (2010) La révolution individualiste. Colloque annuel des intervenants en toxicomanie et autres dépendances portant sur La médecine des addictions. Conférence plénière, France.

59. Guittet A (2011) Construire du lien. Les capacités relationnelles. Armand Collin.

60. Adams PJ (2008) Gambling, Freedom and Democracy. Taylor & Francis, New York.

61. O'Keeffe GS, Kathleen Clarke-Pearson (2011) The impact of social media on children, adolescents and families. Pediatrics 127: 800-804.

62. Levard O, Soulas, D (2010) Facebook: mes amis, mes amours... des emmerdes!. Michalon Éditions.

63. Ruggerio TE (2000) Uses and gratifications in the 21st century. Mass Communication & Society 3: 3-37.

64. Granic I, Lobel A, Engels R (2013) The benefits of playing video games. American Psychologist 69: 66-78.

65. http://m.radio-canada.ca/regions/montreal/2015/03/03/004-jeu-video-vision-amblyopie-correction-yeux.shtml

66. Courrier International (2015) Internet plus fort que les États.

67. Baril D (2008) Une nouvelle forme de dépendance: être accro à internet.

68. Kuss DJ, Griffiths (2012) La dépendance au jeu sur Internet: Une revue systématique de recherche empirique disponible dans la littérature. Adolescence 30: 17-49.

69. Hautefeuille M, Wellenstein A (2012) Les usages problématiques des jeux vidéo. Psychotropes. Revue internationale des toxicomanies et des addictions. 18: 3-4.

70. http://www.01net.com/editorial/298974/hospitalises-pour-addiction-aux-jeux-en-ligne/

71. Hodgins DC, Fick GH, Murray R, Cunningham JA (2013) Internet-based interventions for disordered gamblers: study protocol for a randomized controlled trial of online self-directed cognitive-bahavioural motivational therapy. BMC Public Health 13: 10.

72. Suissa JA (2013a) Gambling as a social problem. Canadian Social Work Review. Revue Canadienne de service social 30: 83-100.

73. Agence de la santé et des services sociaux de Montréal (2012) Guide d'activités Bien Joué. Sensibilisation et prévention des risques associés aux jeux d'argent auprès d'adolescents. Québec.

74. Peele S (2004) 7 tools to beat addiction. (1st edn) Three Rivers Press, New York.

75. Suissa JA (2009) Vulnerability and gambling addiction: psychosocial benchmarks and avenues for intervention. International Journal of Mental Health & Addictions 9: 12-23.

76. Frances A (2013) Saving normal: An insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma and the medicalization of Ordinary Life.